L 29212-66

ACC NR: AP6019079

2nd stage of the reaction was not observed. The 4-stage, phasic changes in cardiac activity were secondary: they developed as a result of the effect of the primary changes (those in the blood pressure) on the baroreceptors of the carotid sinuses and of the aortic arch. On suppression of the sino-aortic mechanism, which masked the direct action of adrenalin on the heart, this action could be observed. Bilateral vagotomy or administration of atropine (0.1 mg/kg) did not affect the changes in blood pressure produced by adrenalin, but the phasic changes in cardiac activity were eliminated. On administration of ganglion-blocking agents (10 mg/kg tetamon-I or 1-2 mg/kg hexonium), these phasic changes also did not take place - there was only a uniform acceleration in cardiac activity. The direct action on the heart predominated over the reflex mechanism when doses of adrenalin greater than 500 gamma were administered: a pronounced tachycardia was produced, while the blood pressure increased simultaneously. Orig. art. has: 6 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 20Jan64 / ORIG REF: 010 / OTH REF: 015

Card 2/2 CC

LOOGA, R.Yu. [Looga, R.]; KULL', M.M. [Kull, M.]

Method of bloodless determination of arterial pressure in laboratory animals. Biul. eksp. biol. i med. 55 /i.e. 56/ no.10: 116-119 O'63 (MIRA 17:8)

1. Iz kafedry patologicheskoy fiziologii (ispolnyayushchiy obyazannosti zaveduyushchego - dotsent R.Looga) Tartuskogo universiteta. Predstavlena deystvitel'nym chlenom AMN SSSR V.V. Parinym.

[illegible], T.; KALL, M.P. [Kall, M.]; LUUSA, L.

Changes in the arterial pressure and cardiac rhythm in dogs following introduction of adrenaline. Fiziol. zhur. SSSR no.5:564-571 My '65. (MIRA 18:6)

1. Kafedra patologicheskoy fiziologii Gosudarstvennogo universiteta, Tartu.

KULLA, G.

"Cellulose for Further Chemical Treatment." p. 62 (CHEMICKE ZVESTI, Vol. 5, No. 1/2, Jan./Feb. 1951) Bratislava, Czechoslovakia

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 4, April 1954. Unclassified.

KULLE, P. A.

ANTONOV, N.P.; KULLE, P.A.; MARAMZIN, A.V.; UTKIN, I.A.; VITTORF, M.V., redaktor; MOLOKOVA, Ye.I., vedushchiy redaktor; SOKOLOVA, Ye.V., tekhnicheskiy redaktor

[Exploratory drilling with the ZIF-300 drilling unit; practical manual] Razvedochnoe burenie stankami ZIF-300; prakticheskoe rukovodstvo. Leningrad, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1954. 221 p. (MLRA 7:9)
(Boring machinery)

KULLE, P. A., PONOMAREV, P. V.

"Basic Principles of the Hydroelectrical Effect and Possibilities of Its Use in Borehole Drilling"

(New Developments in the Methods and Techniques of Geological Exploration) Leningrad, Gostoptekhizdat, 1958. 423 p. (Series: Its: Sbornik trudov 1)

KULLE, P.A.; PONOMAREV, P.V.

Nature of the electrohydraulic method and possibilities of using it in drilling wells. Trudy VITR no.1:366-388 '58.
(MIRA 12:1)

(Boring)

KULLE, P.A.; LOPACHENOK, L.V.

Automation of the process of drying of salts in an apparatus with a fluidized bed. Khim.prom. no.11:805-808 N '62.
(MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut galurgii.
(Salts--Drying) (Fluidization)
(Automatic control)

KULIE, P.A., doktor tekhn.nauk; LOPACHENOK, L.V.

Automatic control of a fluidized-bed unit for drying potassium chloride. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. no.2:16-18 '63. (MIRA 16:2)
(Potassium chloride--Drying) (Automatic control)

KULLE, P.A.; LOPACHENOK, L.V.

Electron modeling of automatic control systems for dryers with fluidized bed. Khim.prom. 41 no.6:412-415 Je '65.

(MIRA 18:8)

KULLE, Ye. A.

"The Problem of the Long-Term Incubation Period of Tertian Malaria in Vologoda Oblast", Med. Paraz. i Paraz. Bolez., Vol. 17, No. 1, pp 57-64, 1948.

S/137/62/000/001/154/237
A006/A101

AUTHOR: Kullel, I.

TITLE: Recommendations as to the melting and processing of the L-214 alloy

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 1, 1962, 44-45, abstract 1I310 (V sb. "26-y Mezhdunarodn. kongress liteynshchikov, 1959", Moscow, Mashgiz, 1961, 530 - 537)

TEXT: Mechanical tests and microscopical investigations were made with a great number of specimens of different heats of the L-214 alloy. The tests made it possible to establish a definite connection between σ_b and δ, which is expressed by a straight line on the semi-logarithmic scale. Specimens, for which σ_b and δ are located directly on this line or close to it, do not possess intercrystalline microporosity. If however, the values of mechanical properties are located below the aforementioned line, this indicates intercrystalline porosity, which is usually connected with insufficient dissolving of strengthening phases. Experimental data were analyzed and a comparison was made of the chemical compositions of the L-214 alloy, French grade alloys AJR3380, AF NOR-A57-702, Italian grade G-Al, Cu 4.5, and German DIN1725 alloys. The following composition of the

Card 1/2

8/137/62/000/001/154/237
A006/A101

Recommendations as to the melting ...

alloy can be recommended (in %): Cu 4.0 - 4.8; Ti 0.2 - 0.3; Mg 0.15 - 0.3; Si ≤ 0.3, Zn ≤ 0.1 and other elements ≤ 0.2. A higher Cu content (over 5%) is not recommended due to the danger of arising composite low-melting eutectics, which may entail burning of the alloy during heat treatment. To assure maximum dissolving of secondary phases, the following heat treatment conditions are recommended: heating for 3 hours from 100 to 530 ± 5°C, holding for 6 hours, temperature decrease to 500°C, 1 hour holding, cooling in water at 50°C, heating at 130 ± 20°C for 2 hours with subsequent air cooling.

E. Kadaner

[Abstracter's note: Complete translation]

Card 2/2

KIRRET, O.; KÜLLIK, E.

Identification of natural and synthetic fibers by the gas chromatographic method. Izv. AN Est. SSR. Ser. fiz.-mat. i tekh. nauk 13 no.1:15-21 '64 (MIRA 18:1)

1. Academy of Sciences of the Estonian S.S.R., Institute of Chemistry. 2. Corresponding Member of the Academy of Sciences of the Estonian S.S.R. (for Kirret).

KULMAN, Eugen

Effect of Quaternary sediments on the hydrogeologic conditions of the piedmont depression of Záhorská nizina. Geol prace 64:159-164 '83.

1. Dionyz Stur Geological Institute, Bratislava.

KLIMES-SZMIK, Andor; KULLMANN, Anton

Factors directly influencing the determination of the porosity of soils. Agrokem talajtan 2 no.1:55-72 Mr '62.

1. Magyar Tudomanyos Akademia Talajtani es Agrokemiai Kutato Intezete, Budapest (for Klimes-Szmik). 2. NMgTA Foldmuvelesi es Novenytermesztesi Kutato Intezete, Muncheberg/Mark, Nemet Demokratikus Koztarsasag (for Kullmann).

KULIMANN, Lajos, MAV muszaki fotanacsos

The work of the International Railway Union and the Organization for Cooperation of Socialist Railways in the delvelopment of railroad vehicles. Jarmu mezo gep 10 no.4:121-126 Ap '63

[redacted], H.

Development in woodworking machinery during the past 40 years. Tr. from the German. p.91

FAIPAR. (Faipari Tudomanyos Egyesulet)
Budapest, Hungary
Vol. 9, no.3, Mar. 1959

Monthly List of East European Accessions (EEAI) LC., Vol. 8, no.7, July 1959
Uncl.

KULLOI-RHOHER, L.

Therapeutic value of the cervical sympathetic block; experiences from 700 experimental infiltrations. Orv. hetil. 92 no.19:592-596 13 May 1951. (CIML 24:2)

1. Doctor. 2. First Surgical Clinic (Director -- Prof. Dr. Gyula Sebesteny), Lorand Eotvos University, Budapest.

KULLOI-RHORER, Laszlo, dr.

[redacted]

Modified operative method for sympathetic denervation of the upper extremities. Magy.sebeszet 8 no.1:62-68 Feb 55.

(SYMPATHECTOMY,
dorsal, modified method)

KULLOI RHORER, Laszlo, Dr.

Justification of high lumbar sympathectomy. Magy. sebeszet 10 no.2-3: 114 119 Apr-June 57.

1. A Budapesti Orvos tudomanyi Egyetem II. sz. Seveszeti Klinikajanak kozlemenye Igazgato: Rubanyi Pal dr. egyetemi tanar.

(SYMPATHECTOMY, in various dis.
high lumbar sympathectomy in peripheral vasc. dis., evaluation (Hun))
(VASCULAR DISEASES, PERIPHERAL, surg.
sympathectomy, high lumbar, evaluation (Hun))

KULLOI-RHORER, L.; ERDELYI, M.; MESZOLY, I.; VOTIN, J.

Clinical experiences on the therapy of postoperative complaints following cholecystectomy. Acta med. hung. 10 no.3:261-272 1957.

1. II. Chirurgische Klinik der Medizinischen Universitat, Budapest.

(CHOLECYSTECTOMY, compl.
postcholecystectomy synd., choledochoduodenostomy (Ger))
(BILE DUCT, COMMON, surg.
choledochoduodenostomy in postcholecystectomy synd. (Ger))
(DUODENUM, surg.
same)

KULLOI-RHORER, Laszlo, dr.

Data on the surgical treatment of elephantiasis. Orv. hetil. 98 no.1-4:56-60 Jan 57.

1. A Budapesti Orvostudomanyi Egyetem III. sz. Sebeszeti Klinikajanak (igazgato: Rubanyi, Pal, dr. egyet. tanar) kozlemenye.

(LYMPHEDERMA, surg.
elephantiasis, lymphangiectomy with total superficial surg. (Hun))

KULJOI-RHOHER, Laszlo, dr., sebeszfoorvos

Fundamentals of health protection. Vasut 14 no.11:20 '64.

KULLOI-RHORER, Laszlo, dr.

Surgically cured duodenal carcinoid. Orv. hetil. 106 no.12: 553-555 21 Mr '65

1. Mav Korhaz es Kozponti Rendelointezet, I. Sebeszeti Osztaly.

SMIRNOV, V.N.; SPIRIN, A.S.; KULLYYEV, P.; ZBARSKIY, I.B.

RNA synthesis in the silk gland of the mulberry silkworm. Dokl. AN SSSR 155 no. 4:957-960 Ap '64. (MIRA 17:5)

1. Institut biokhimii im. A.N.Bakha AN SSSR i Institut morfologii zhivotnykh im. A.N.Severtsova AN SSSR. Predstavleno akademikom A.N.Belozerskim.

SITRNOV, V.N.; KULLYYEV, P.; VARSHAVSKIY, Ya.M.; SPIRIN, A.S.

Participation of ribosomes in the biosynthesis of silk fibroin.
Dokl. AN SSSR 156 no. 5:1221-1224 Je '64. (MIRA 17:6)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR i Institut biokhimii im. A.N.Bakha AN SSSR. Predstavleno akademikom A.N.Belozerskim.

MAMEDNIYAZOV, O.N.; SOLOV'YEVA, N.V.; KULLYYEV, P.; KASPAR'YANTS, L.R.

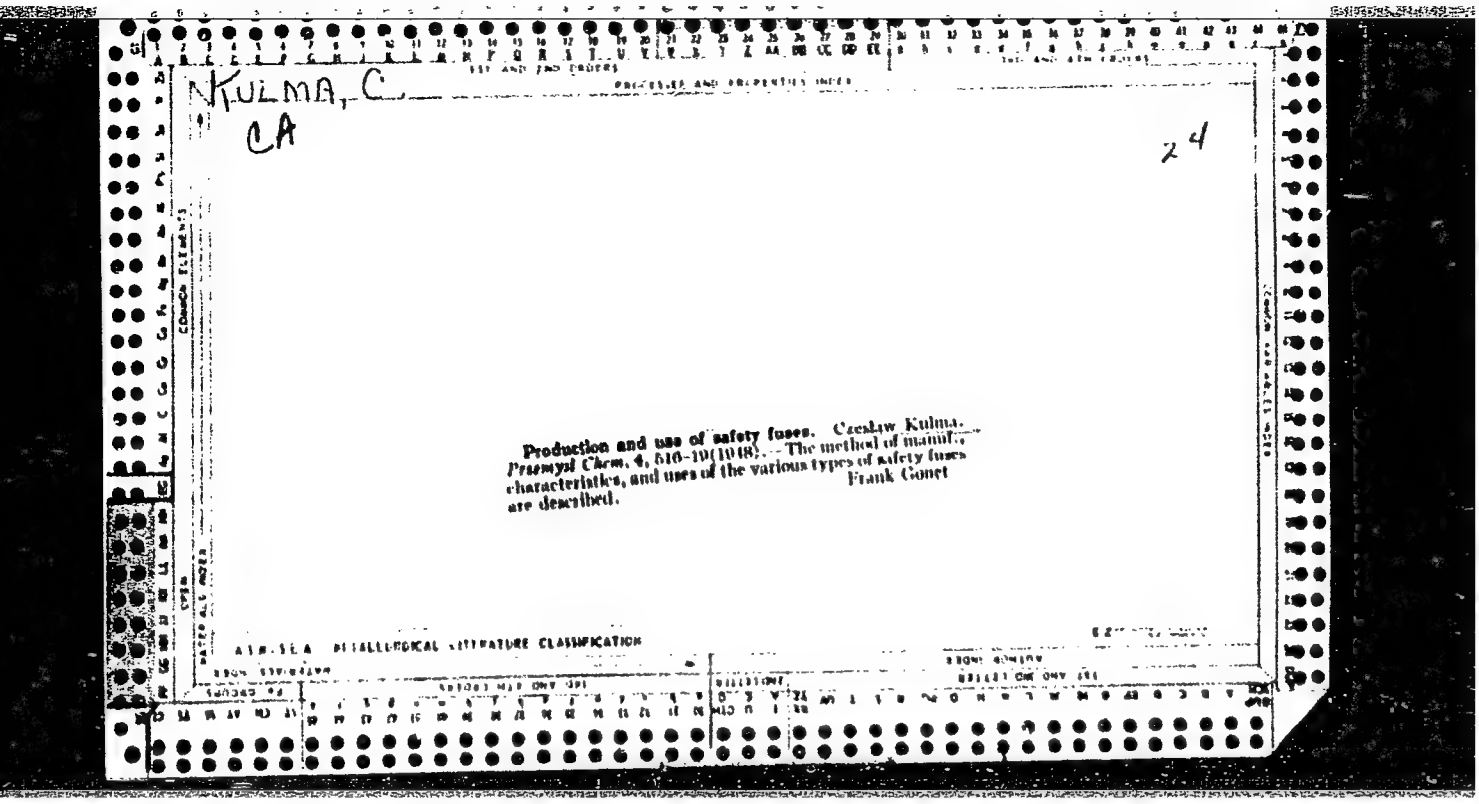
Comparative study of the chemical composition of different mulberry varieties growing in Chardzhou District, Turkmen S.S.R. Izv. AN Turk. SSR. Ser. biol. nauk no.5:68-72 '61. (MIRA 14:12)

1. Institut zoologii i parazitologii AN Turkmenskoy SSR.
(CHARDZHOU DISTRICT--MULBERRY--VARIETIES)

MAMEDNIYAZOV, O.N.; KASPAR'YANTS, L.R.; KULLYYEV, P.

Content of nitrogen compounds in the hemolymph of various mulberry silkworm strains differing in their productivity. Izv. AN Turk. SSR.Ser. biol. nauk no.2:69-73 '62. (MIRA 17:4)

1. Institut zoologii i parazitologii AN Turkmenskoy SSR.



KULMA, C
CA

24

Production and use of safety fuses. Czeslaw Kulma. *Przemysl Chem.* 4, 510–19(1918).—The method of manufacture, characteristics, and uses of the various types of safety fuses are described.
Frank Conrt

BA KULMA, O.

BI
4

Research on core binders. O. Kulma and Z. Werta (*Przeglad Odlew.*, 1951, **1**, 128—134; *J. Iron Steel Inst.*, 1951, **169**, 403).—Methods of testing core binders are described, and results of a study of binders presented. H. B. CLARKE.

KULMA, O.; WERTZ, Z.

Changes in core strength during its moistening. p. 293.

PRZEGLAD ODLEWNICTWA. (Stowarzyszenie Techniczne Odlewnikow Polskich)
Krakow, Poland, Vol. 9, no. 10, Oct. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

KULMA, S., NEUMANN, S.

"Łozyska toczne" (Roller bearing), by S. Kulma, S. Neumann. Reported in New Books (Nowe Ksiazki), No. 14, July 15, 1955

KULMA, S.

The standardization of journal bearings. p. 473.
MECHANIK, Warazawa. Vol. 28, no. 12, Dec. 1955.

SOURCE: East European Acession List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956.

98-58-4-8/18

AUTHOR: Kul'mach, P.P., Candidate of Technical Sciences

TITLE: On the Rigidity of Foundations of Massive Hydro-Technical Structures (O zhestkosti osnovaniy massivnykh gidrotekhnicheskikh sooruzheniy)

PERIODICAL: Gidrotekhnicheskoye Stroitel'stvo, 1958, Nr 4, pp 35-38 (USSR)

ABSTRACT: In the calculation of free and forced oscillation of hard bodies on an elastic foundation, formulas are used, which include coefficients of rigidity of foundation C_x, C_z and C_φ with regard to shear, compression and rotation of a solid body around a horizontal axis passing through the center of gravity of the bottom. In the latter case the shift of A representing a given point of the structure under the effect of torque could be determined by the formula

$$A = \frac{Mr}{J_o C_\varphi}$$

in which r - is the distance between the axis of rotation and the given point

and J_o - the moment of inertia of the surface of the bottom

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On the Rigidity of Foundations of Massive Hydro-Technical Structures

of the structure in relation to the axis of rotation. This formula and those developed are the result of special experimental and theoretical investigations. However, there is no experimental data from which it would be possible to determine the coefficient of rigidity of the foundation of massive hydro-technical structures standing in water and subject to considerable stress at the bottom. In this connection data pertaining to oscillations of certain existing structures, in particular investigations carried out on the breakwater in Algiers, are of special interest. A cross section of the breakwater is shown, consisting of 4 layers of masonry, each weighing 400 - 500 tons topped by a monolithic superstructure. This massive wall which measures 13 m at the bottom rests on a 4 m stone foundation. In 1934, the breakwater was severely damaged. Extensive investigations, which were conducted to determine the cause, furnished valuable information which permitted the evaluation of the coefficient of rigidity of the base of the breakwater. The results of these experiments are fully described as are the results of similar tests at Tuapse, Yalta, Feodosiya, Zeebryugge, Marsel and Kataniya. In all cases, it was observed

On the Rigidity of Foundations of Massive Hydro-Technical Structures

that breakwaters begin to sway even when small waves beat against the walls. The subject demands special investigations, however, the results shown can be utilized in the dynamic calculations of hydrotechnical structures. There are 3 figures, 1 table and 13 references, of which 8 are Soviet, 3 French and 2 Italian.

AVAILABLE: Library of Congress

Card 3/3 1. Structures-Design 2. Structures-Mathematical analysis 3. Dams-Design

KUL'MACH, P.P., kand.tekhn.nauk

Vibration of a solid body resting on a mobile elastic foundation.
Izv. VNIIG 60:142-153 '58. (MIRA 13:6)
(Foundations) (Elastic solids)

KUL'MACH, P.P., kand. tekhn. nauk dots. (Leningrad)

Application of the problem in vibrations of elastically supported solid bodies. Issl. po teor. sooruzh. no.8:79-91 '59.
(MIRA 12:12)

(Foundations--Vibration) (Damping (Mechanics))

KUL'MACH, P.P. (Leningrad)

Dynamic calculation of structures with high rigid pile grillage; seismic effect. Osn., fund. i mekh. grun. 4 no.3:21-24 '62.
(MIRA 15:7)

(Piling (Civil engineering))
(Earthquakes and building)

KUL'MACH, Pavel Petrovich; YUFIN, A.P., doktor tekhn. nauk, prof., otv. red.; ORPIK, S.L., red. izd-va; UL'YANOVA, O.G., tekhn.red.

[Hydrodynamics of hydraulic structures]Gidrodinamika gidrotekhnicheskikh sooruzhenii; osnovnye ploskie zadachi. Moskva, Izd-vo Akad. nauk SSSR, 1963. 189 p. (MIRA 16:2)
(Hydraulic structures)

KUL'MACH, P. P., kand tekhn nauk, dotsent

Action of water on the blades of a hydraulic turbine in presence of vibrations. Izv vys uchab zav; energ 7 no. 1:86-91 Ja '64. (MIRA 17:5)

KUL'MAKHANOV, Ye.; SOLOPOV, A.; KOVALEV, V., prepodavatel'

News from schools. Prof.-tekh. obr. 20 no.1[illegible]2, 3 of cover Ja '63.
(MIRA 16:2)

1. Pomoshchnik direktora po kul'turnovospitatel'noy rabote khodzheylinskogo uchilishcha mekhanizatsii sel'skogo khozyaystva No.24, Kara-Kalpakskaya ASSR (for Kul'makhanov). 2. Tekhnicheskoye uchilishche No.10, L'vov (for Kovalev).
(Vocational education)

22 (1)

AUTHORS: Kul'mamet'yev, G., School Director, and Demin G., Deputy School Director

SOV/27-59-2-11/30

TITLE: On the New Road (Na novom puti)

PERIODICAL: Professional'no-tekhnicheskoye obrazovaniye, 1959, Nr 2, pp 18 - 19 (USSR)

ABSTRACT: The reorganization of the MTS and transfer of their equipment to the kolkhozes has necessitated a revision of present curricula in agricultural mechanization schools. As the existing Labor Reserve Schools will be maintained for the next 3 to 5 years, the authors believe that mechanization schools can divide their activities into 3 periods: 1) Present activities remain unchanged until 1961; 2) Transitional period 1962-63 and 3) Period of complete reorganization into agricultural vocational-technical schools. During the first period as before, young people, preferably with 7 years of education and not younger than 17 should be admitted. Changes in the curricula are suggested which would give the students more time to become skilled in repair work. Another suggestion aims at training a new type

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of workman - a mechanic with 1 year of training for installation and repair of stationary agricultural machinery. The authors complain that their school is short of up-to-date equipment such as tractors DT-24, DT-28, DSSh-16 and DT-54 with a hydraulic system, and of combiners S-4M, SK-3, PK-2, and stress that it is important to train students on modern equipment. During the transitional period, mechanization schools should work on two curricula: the old one with 1 year of training for tractor operators and the installation and repair mechanics and a new curriculum with 2 years of training. The new period is necessitated by introduction of the 8-year polytechnical school. It is also considered expedient that training farms have a minimum size of 500 to 700 ha with 250 to 300 students. During the transitional period the mechanization schools will gain some training experience according to the new curriculum and gradually prepare for the complete reorganization into rural vocational technical schools. The latter will admit only graduates from 8-year rural or urban schools. There is 1 photograph.

SOV/27-59-2-11/30

On the New Road

ASSOCIATION: Uchilishche mekhanizatsii sel'skogo khozyaystva Nr 3 (Udmurtskaya ASSR) (School of Agricultural Mechanization Nr 3 (Udmurt ASSR)

Card 3/3

18(5) SOV/128-59-6-18/25

AUTHOR: Kul'mamet'yev, V.S., Engineer

TITLE: Centrifugally Cast Bushes

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 6, p 42 (USSR)

ABSTRACT: Brass bushes of all dimensions have been cast in sand molds. The serviceable castings were 54% to 58% of the whole production. Now centrifugal casting (by means of metal molds with sand core material) has been introduced. (Mixture used: 85% of quartz sand, 15% of Marshalit, etc.). In this manner the production of defects was eliminated, non-ferrous metals saved, and the quality of the castings improved. There is 1 diagram

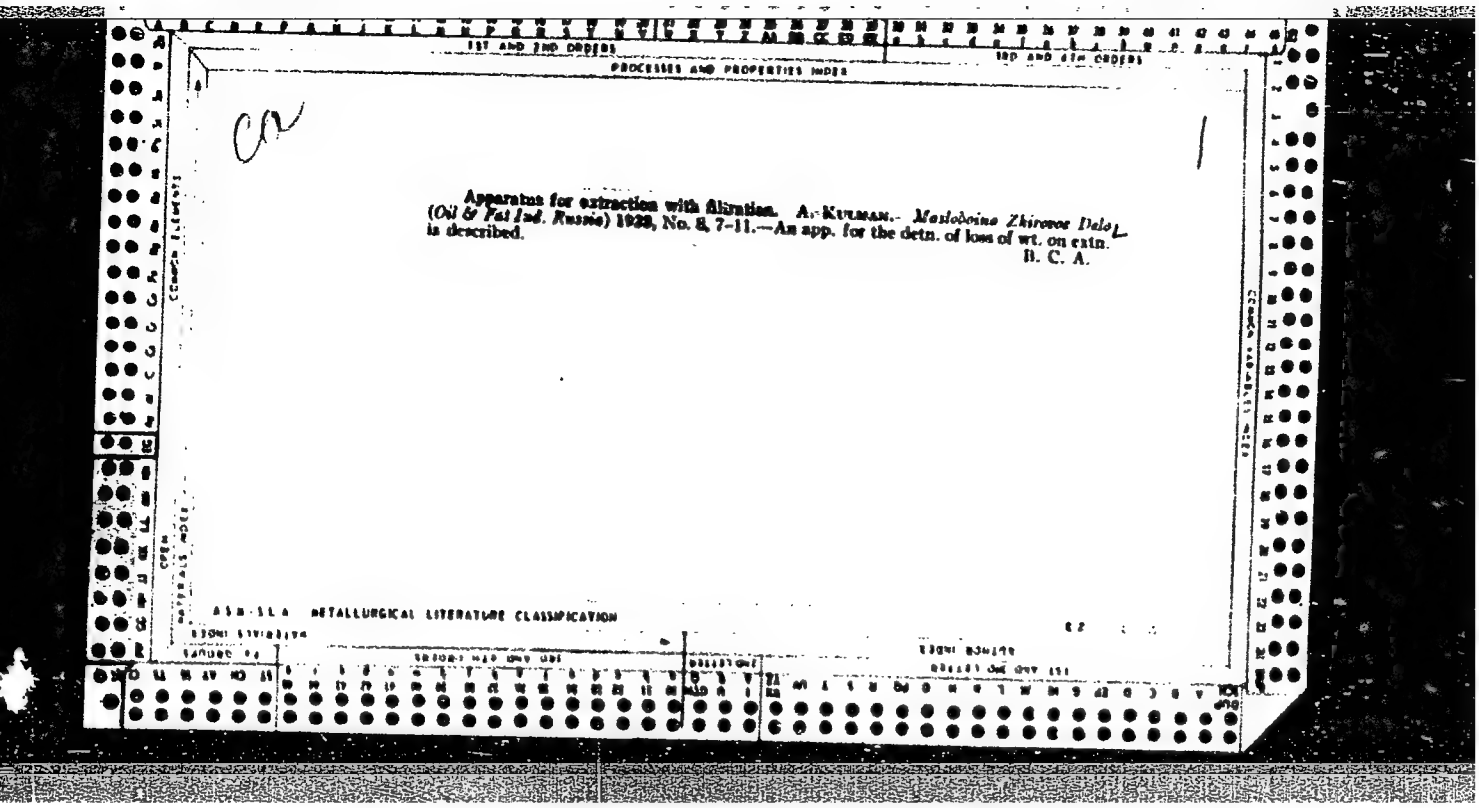
Card 1/1

KULMAN, A.

"Problems in determining the firmness of lumps and the formation of the lumpy structure of soils."

p. 147 (Mezhduna Rodnyi Selskokonoziaistvennyi Zhurnal, Vol. 2, No. 2, 1958, Sofia, Bulgaria).

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 12, Dec. 58.



1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

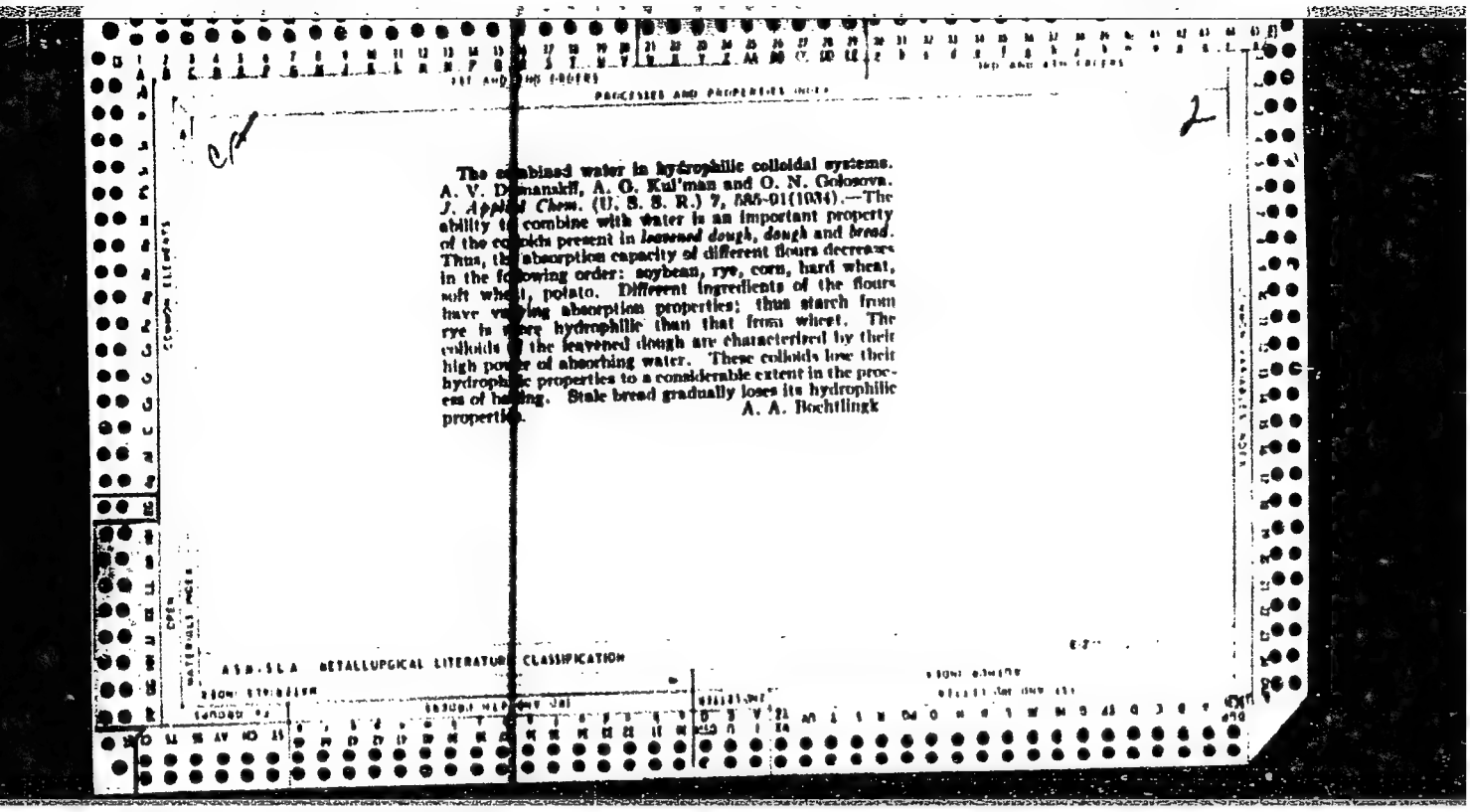
Apparatus for extraction with filtration. A. KUTSKAN. *Maslobóino Zhirovoe Delo* (*Oil & Fat Ind. Russia*) 1928, No. 8, 7–11.—An app. for the detn. of loss of wt. on extn. is described.

B. C. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

DUMANSKIY, A. V., KULMAN, A. G, and GOLOSOVA, C. E.

"Bound Water in Bread Baking," M-L, Snabtekhizdat, 1934.



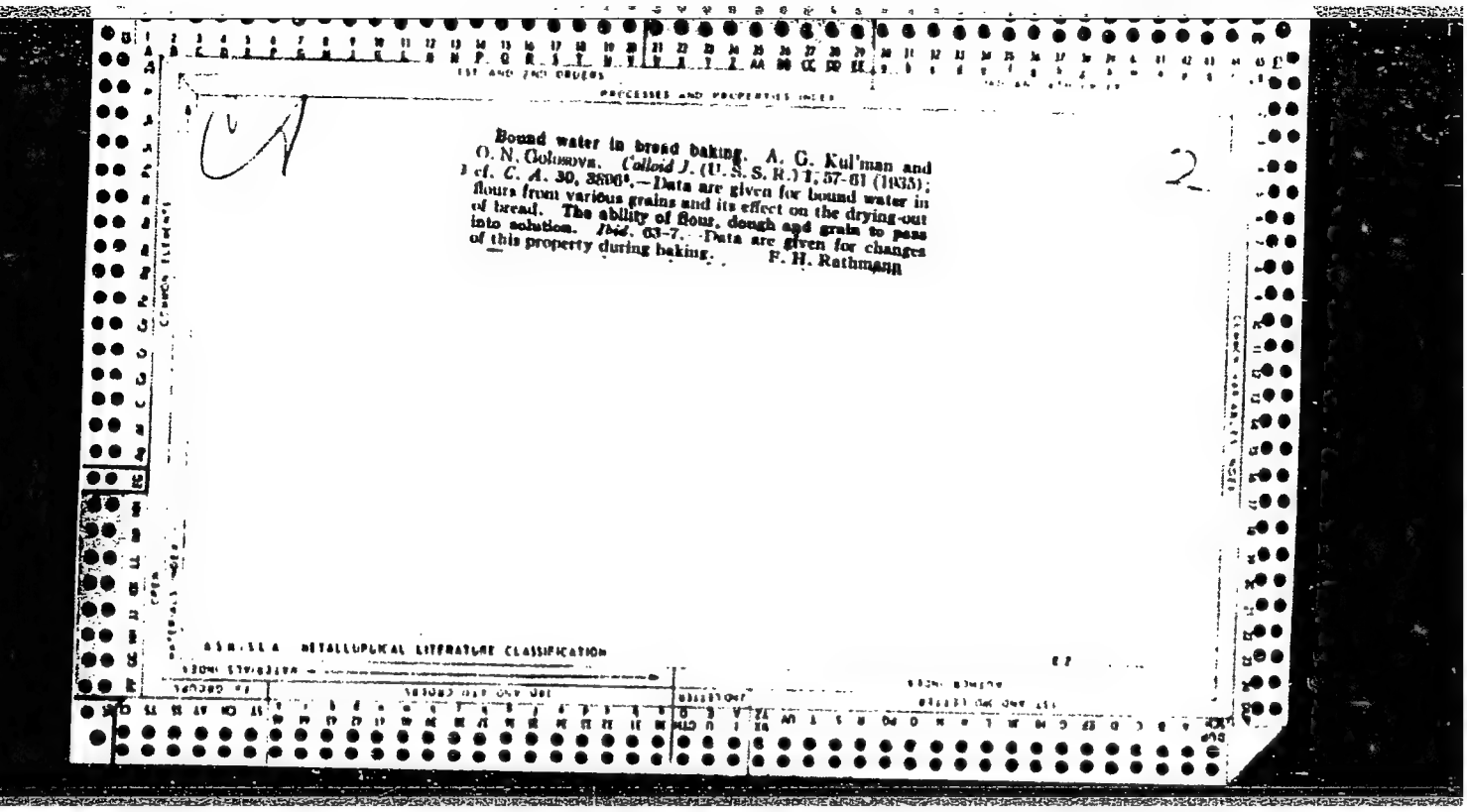
The combined water in hydrophilic colloidal systems. A. V. Dumanskiĭ, A. O. Kul'man and O. N. Golosova. *J. Applied Chem.* (U. S. S. R.) 7, 585-91(1934).—The ability to combine with water is an important property of the colloids present in *leavened dough*, *dough* and *bread*. Thus, the absorption capacity of different flours decreases in the following order: soybean, rye, corn, hard wheat, soft wheat, potato. Different ingredients of the flours have varying absorption properties; thus starch from rye is more hydrophilic than that from wheat. The colloids of the leavened dough are characterized by their high power of absorbing water. These colloids lose their hydrophilic properties to a considerable extent in the process of baking. Stale bread gradually loses its hydrophilic properties.

A. A. Bochtlingk

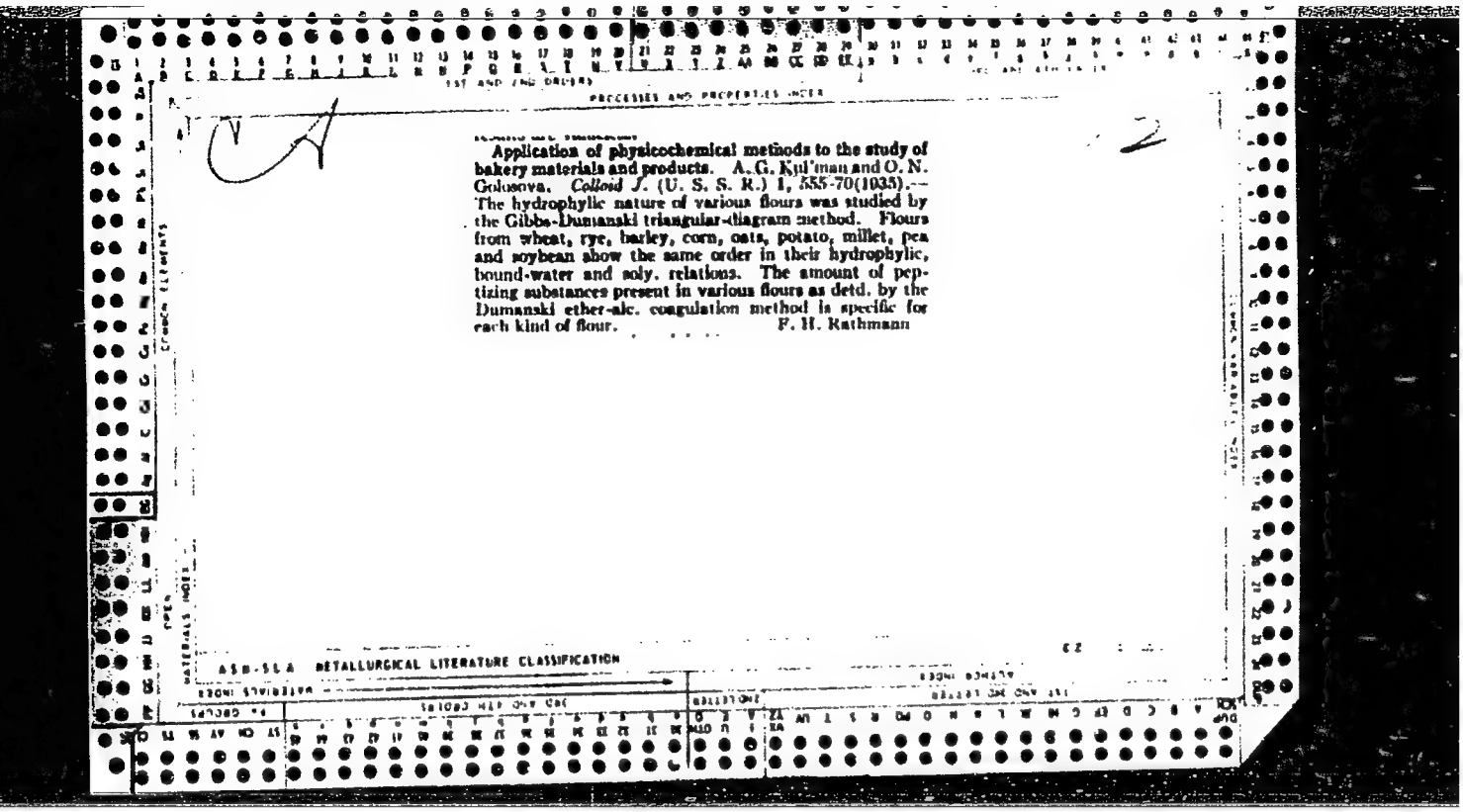
KUL'MAN, A. G.

Textbook of general & inorganic chemistry 2-e perer. izd. Moscow, Sel'khozgiz. 1935. 579 p.

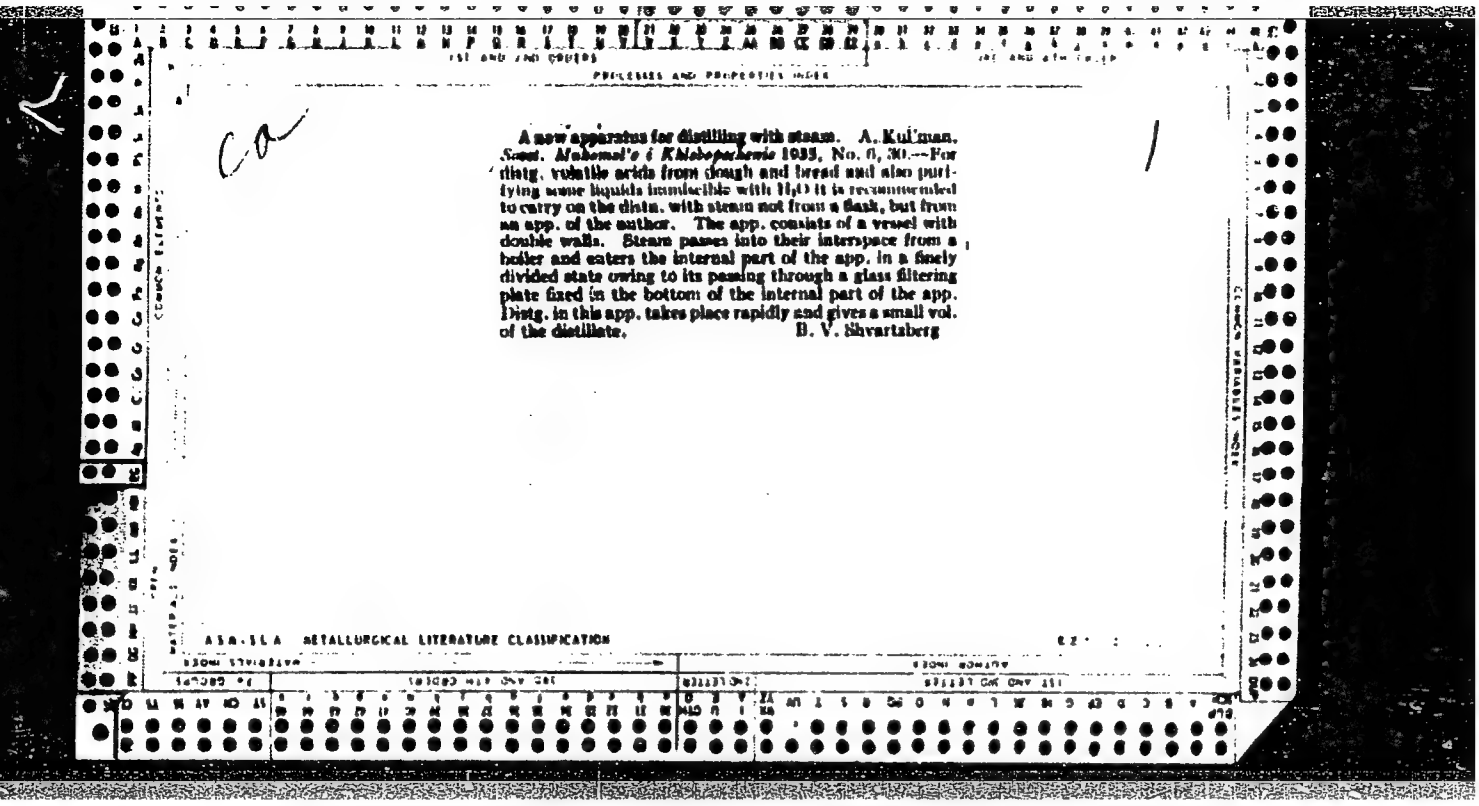
OCl



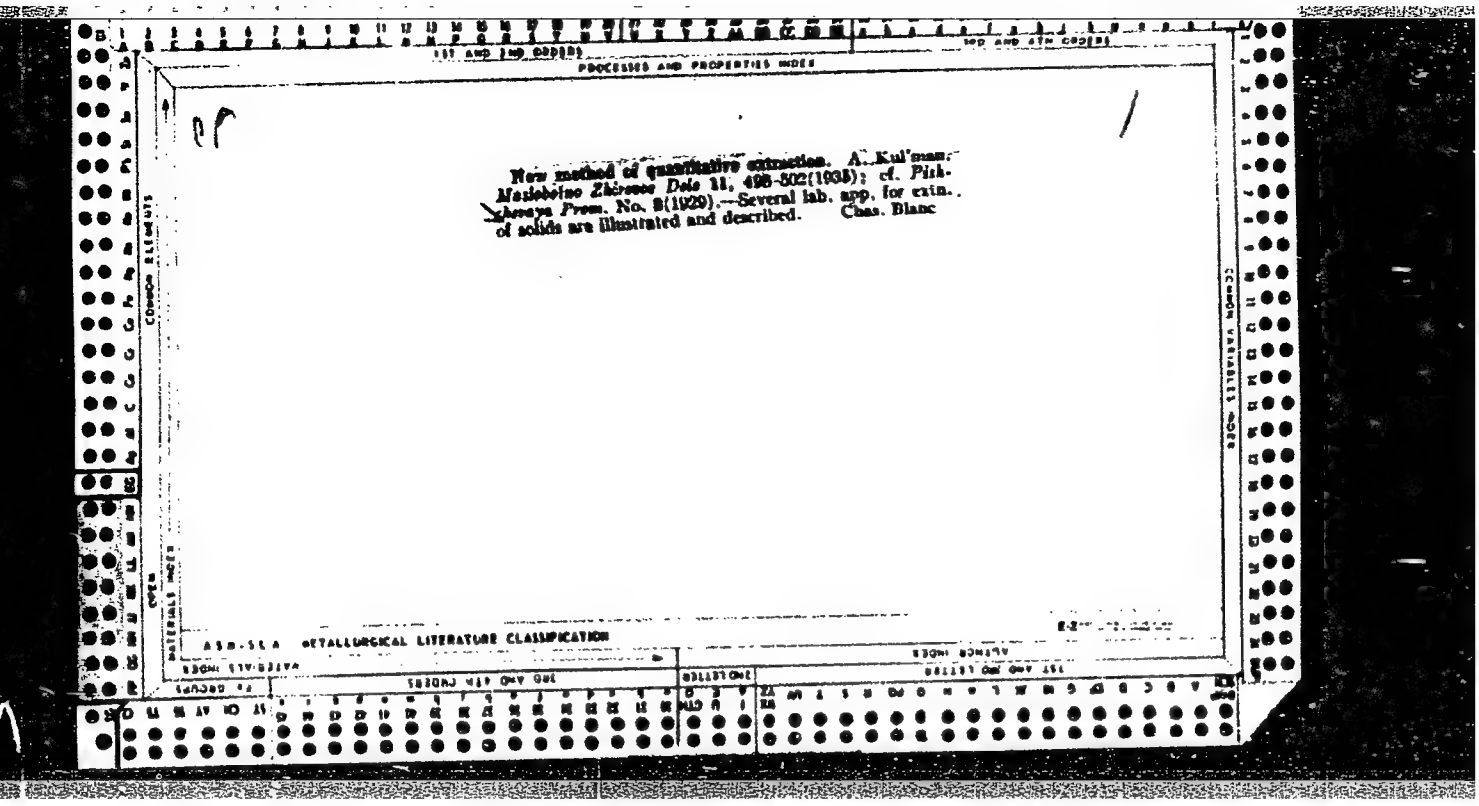
Bound water in bread baking. A. G. Kul'man and O. N. Golunova. *Colloid J.* (U. S. S. R.) 1, 57-61 (1935); cf. *C. A.* 30, 3596⁶.—Data are given for bound water in flours from various grains and its effect on the drying-out of bread. The ability of flour, dough and grain to pass into solution. *Ibid.* 63-7. Data are given for changes of this property during baking. F. H. Rathmann

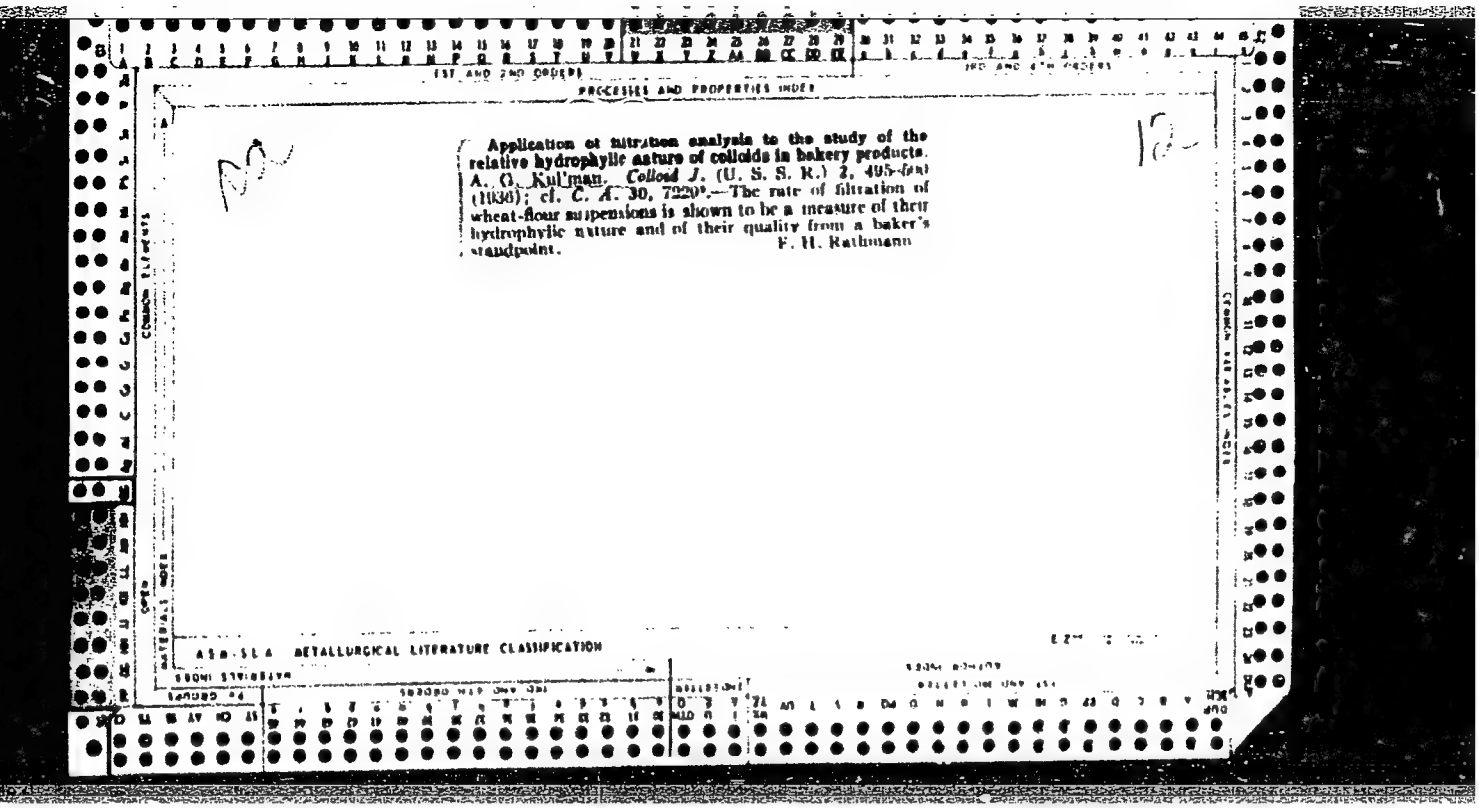


Application of physicochemical methods to the study of bakery materials and products. A. G. Kul'man and O. N. Golosova. *Colloid J.* (U. S. S. R.) 1, 555-70(1935).—The hydrophylic nature of various flours was studied by the Gibbs-Dumanski triangular-diagram method. Flours from wheat, rye, barley, corn, oats, potato, millet, pea and soybean show the same order in their hydrophylic, bound-water and soly. relations. The amount of peptizing substances present in various flours as detd. by the Dumanski ether-alc. coagulation method is specific for each kind of flour. F. H. Rathmann

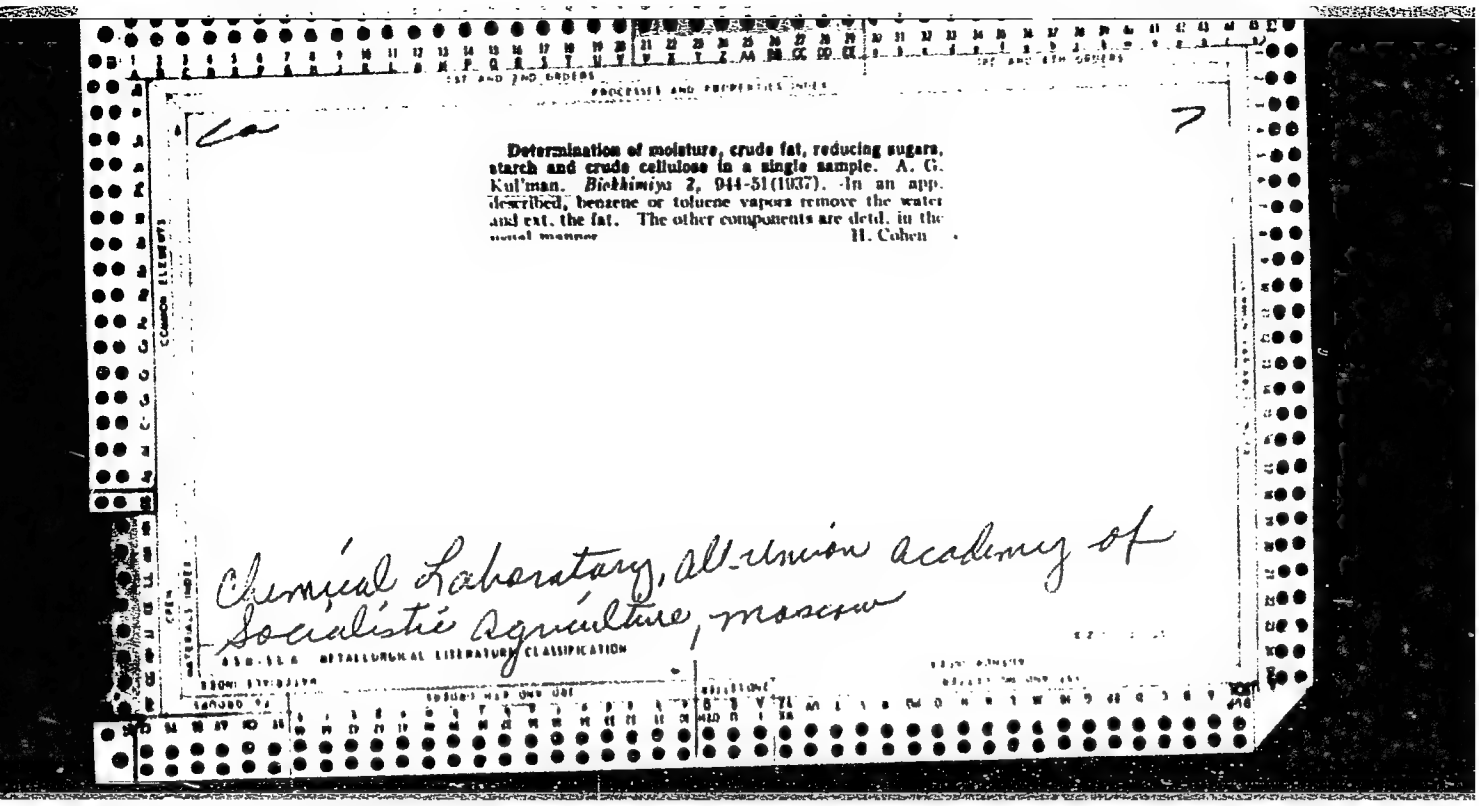


A new apparatus for distilling with steam. A. Kul'man. *Sovet. Alkhemal'o i Khimoparfumerie* 1935, No. 6, 30.—For distg. volatile acids from dough and bread and also purifying some liquids immiscible with H_2O it is recommended to carry on the distn. with steam not from a flask, but from an app. of the author. The app. consists of a vessel with double walls. Steam passes into their interspace from a boiler and enters the internal part of the app. in a finely divided state owing to its passing through a glass filtering plate fixed in the bottom of the internal part of the app. Distg. in this app. takes place rapidly and gives a small vol. of the distillate. B. V. Shvartsberg





Application of filtration analysis to the study of the relative hydrophylic nature of colloids in bakery products. A. G. Kul'man. *Colloid J.* (U. S. S. R.) 2, 495-(in) (1936); cf. *C. A.* 30, 7220⁹.—The rate of filtration of wheat-flour suspensions is shown to be a measure of their hydrophylic nature and of their quality from a baker's standpoint. F. H. Rathmann

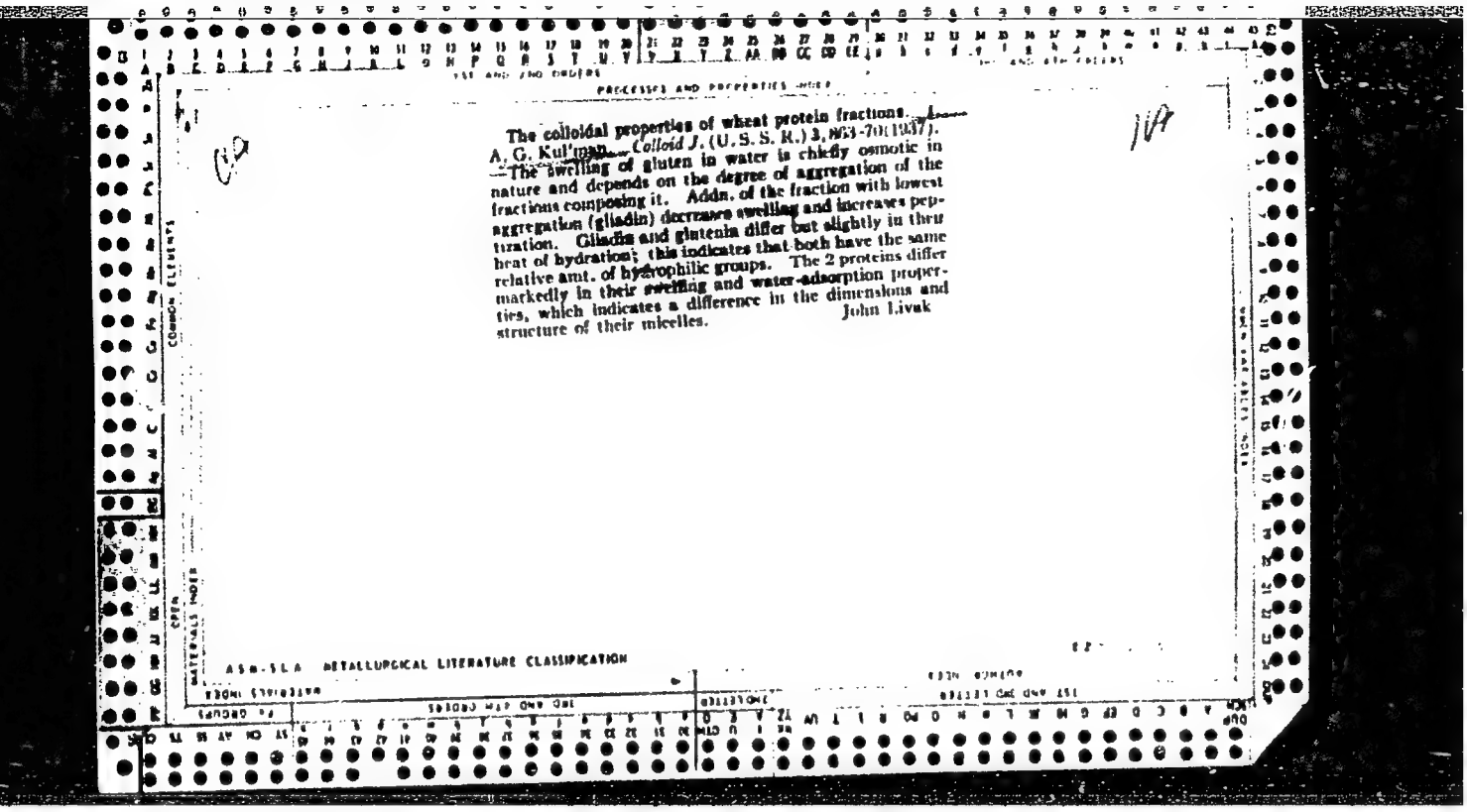


Ca

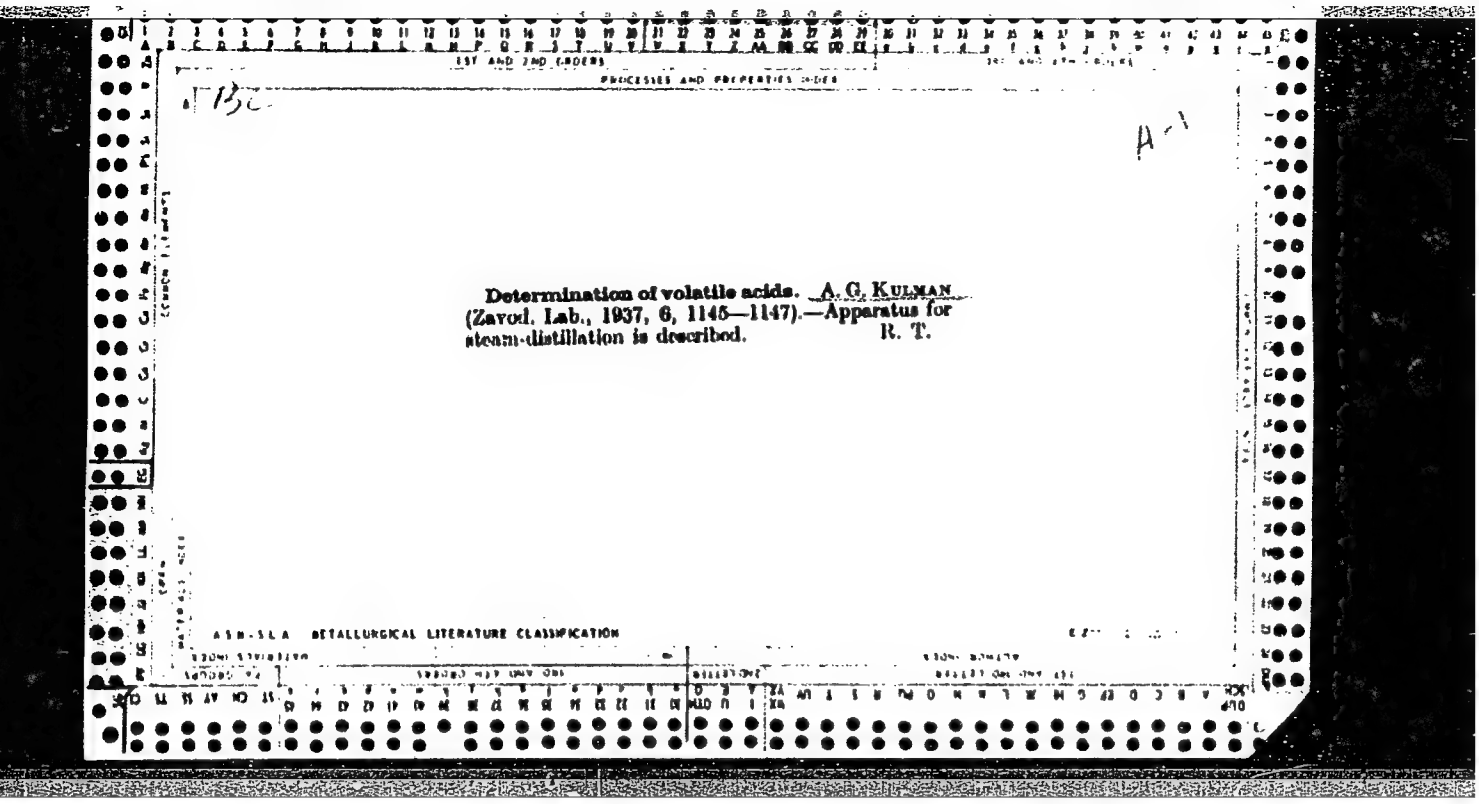
7

Determination of moisture, crude fat, reducing sugars, starch and crude cellulose in a single sample. A. G. Kul'man. *Biokhimiya* 2, 944-51(1937). -In an app. described, benzene or toluene vapors remove the water and ext. the fat. The other components are detd. in the usual manner. H. Cohen

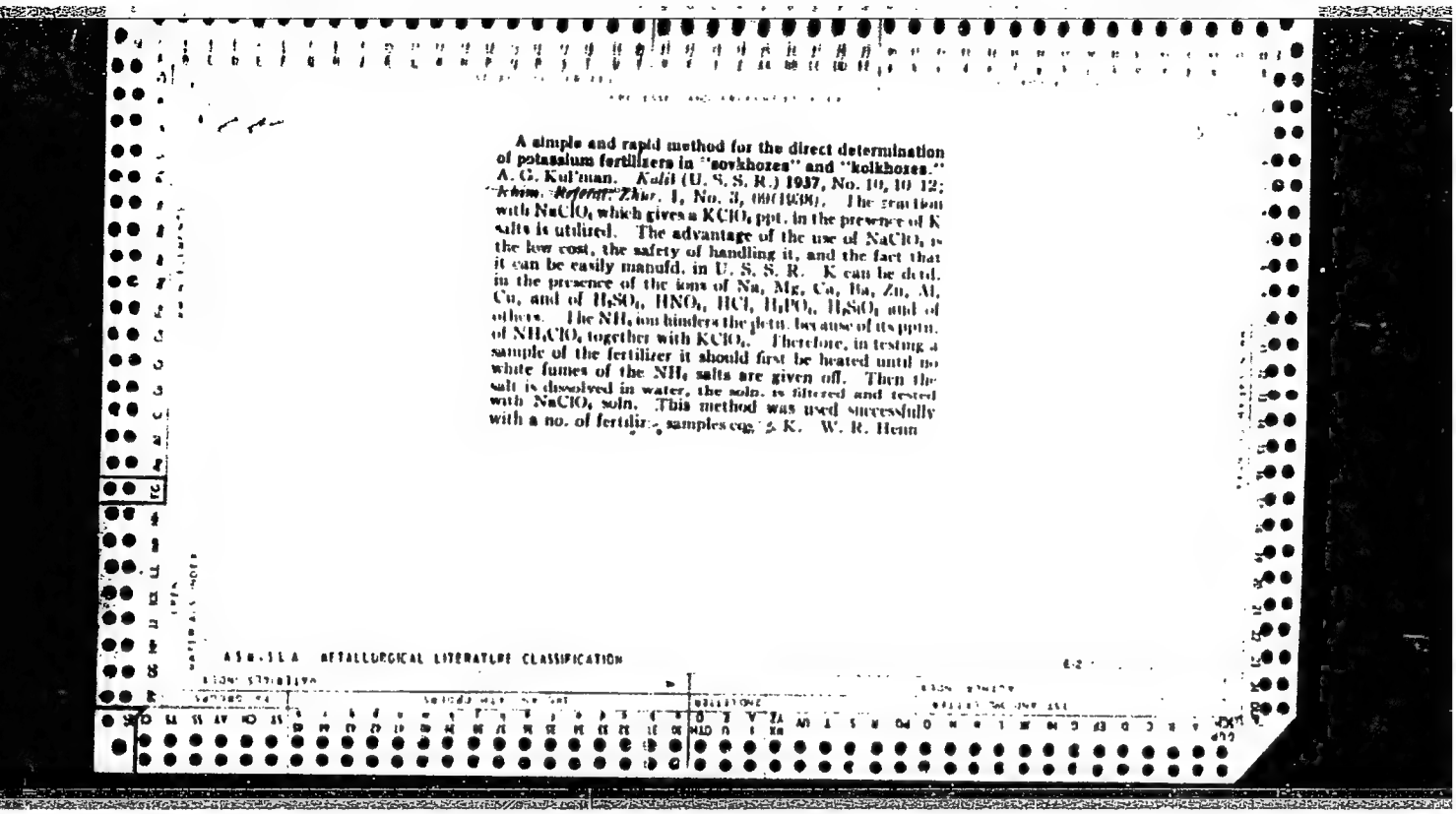
Chemical Laboratory, All-Union academy of Socialistic Agriculture, moscow



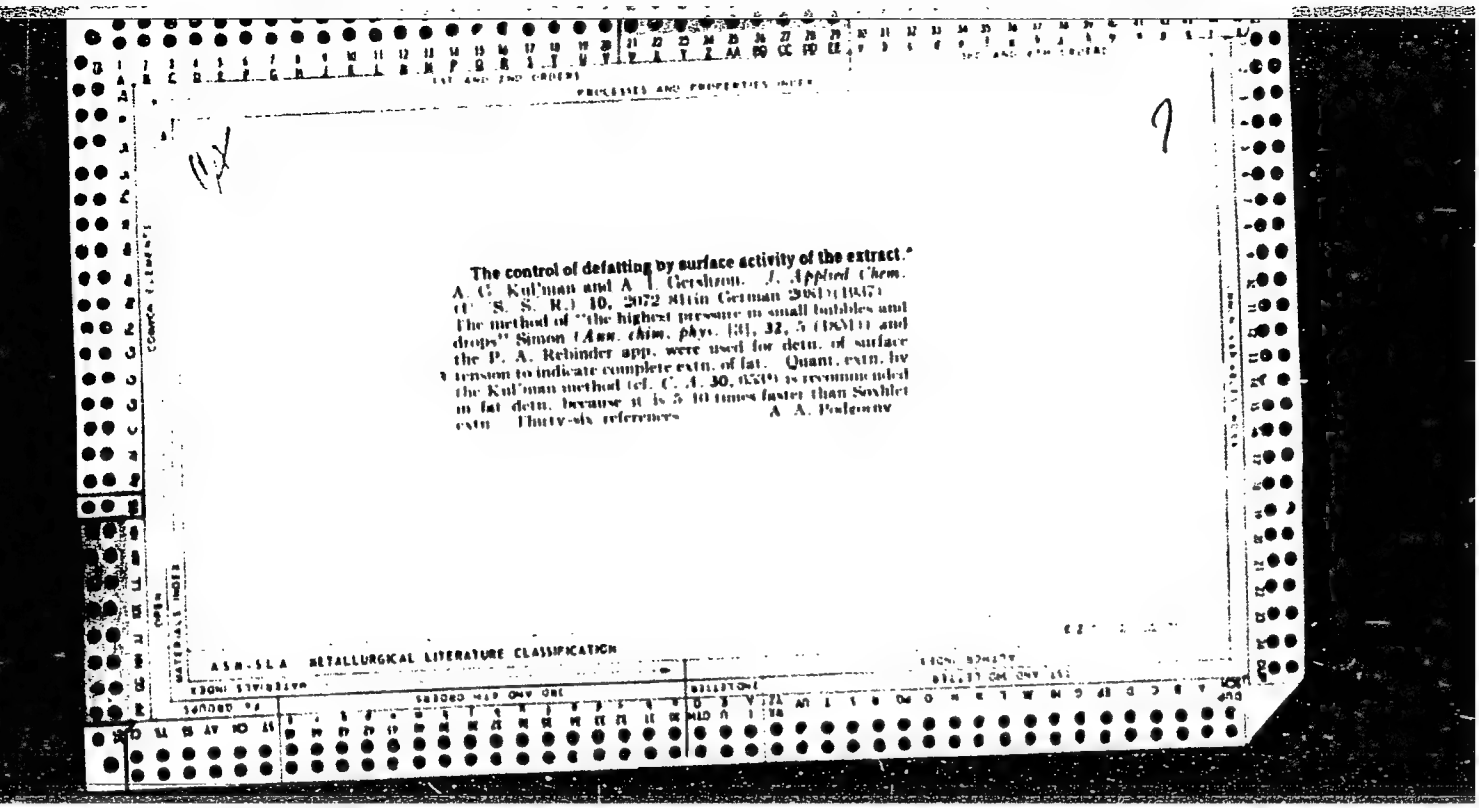
The colloidal properties of wheat protein fractions. A. G. Kul'man. *Colloid J.* (U. S. S. R.) 3, 863-70 (1937). The swelling of gluten in water is chiefly osmotic in nature and depends on the degree of aggregation of the fractions composing it. Addn. of the fraction with lowest aggregation (gliadin) decreases swelling and increases peptization. Gliadin and glutenin differ but slightly in their heat of hydration; this indicates that both have the same relative amt. of hydrophilic groups. The 2 proteins differ markedly in their swelling and water-adsorption properties, which indicates a difference in the dimensions and structure of their micelles. John Livak



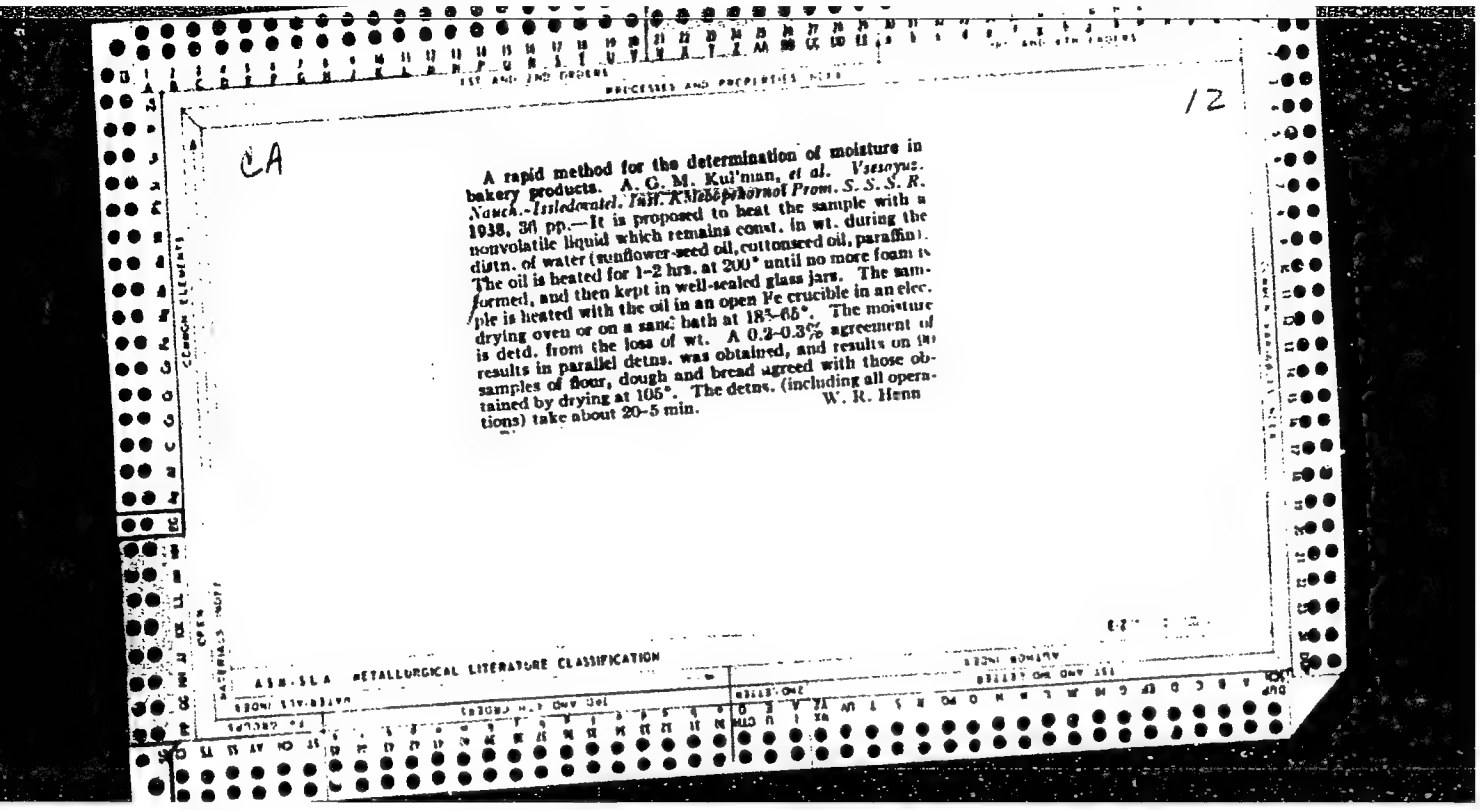
Determination of volatile acids. A. G. KULMAN (Zavod. Lab., 1937, 6, 1145—1147).—Apparatus for steam-distillation is described. R. T.



A simple and rapid method for the direct determination of potassium fertilizers in "sovkhozes" and "kolkhozes." A. G. Kul'man. *Kalii* (U. S. S. R.) **1937**, No. 10, 10-12; *Khim. Referat. Zhur.* 1, No. 3, 69(1938). The reaction with $NaClO_4$ which gives a $KClO_4$ ppt. in the presence of K salts is utilized. The advantage of the use of $NaClO_4$ is the low cost, the safety of handling it, and the fact that it can be easily manufd. in U. S. S. R. K can be detd. in the presence of the ions of Na, Mg, Ca, Ba, Zn, Al, Cu, and of H_2SO_4, HNO_3, HCl, H_3PO_4, H_2SiO_3 and of others. The NH_4 ion hinders the detn. because of its ppta. of NH_4ClO_4 together with $KClO_4$. Therefore, in testing a sample of the fertilizer it should first be heated until no white fumes of the NH_4 salts are given off. Then the salt is dissolved in water, the soln. is filtered and tested with $NaClO_4$ soln. This method was used successfully with a no. of fertilizer samples eg. 5 K. W. R. Henn



The control of defatting by surface activity of the extract.
A. G. Kul'man and A. I. Gershzon. *J. Applied Chem. U. S. S. R.* 10, 2072-81 (in German) (1937). The method of "the highest pressure in small bubbles and drops" Simon (*Ann. chim. phys.* [8], 32, 5 (1881)) and the P. A. Rebinder app. were used for detn. of surface tension to indicate complete extn. of fat. Quant. extn. by the Kul'man method (cf. *C. A.* 30, 6310) is recommended in fat detn. because it is 5-10 times faster than Soxhlet extn. Thirty-six references. A. A. Polgorov



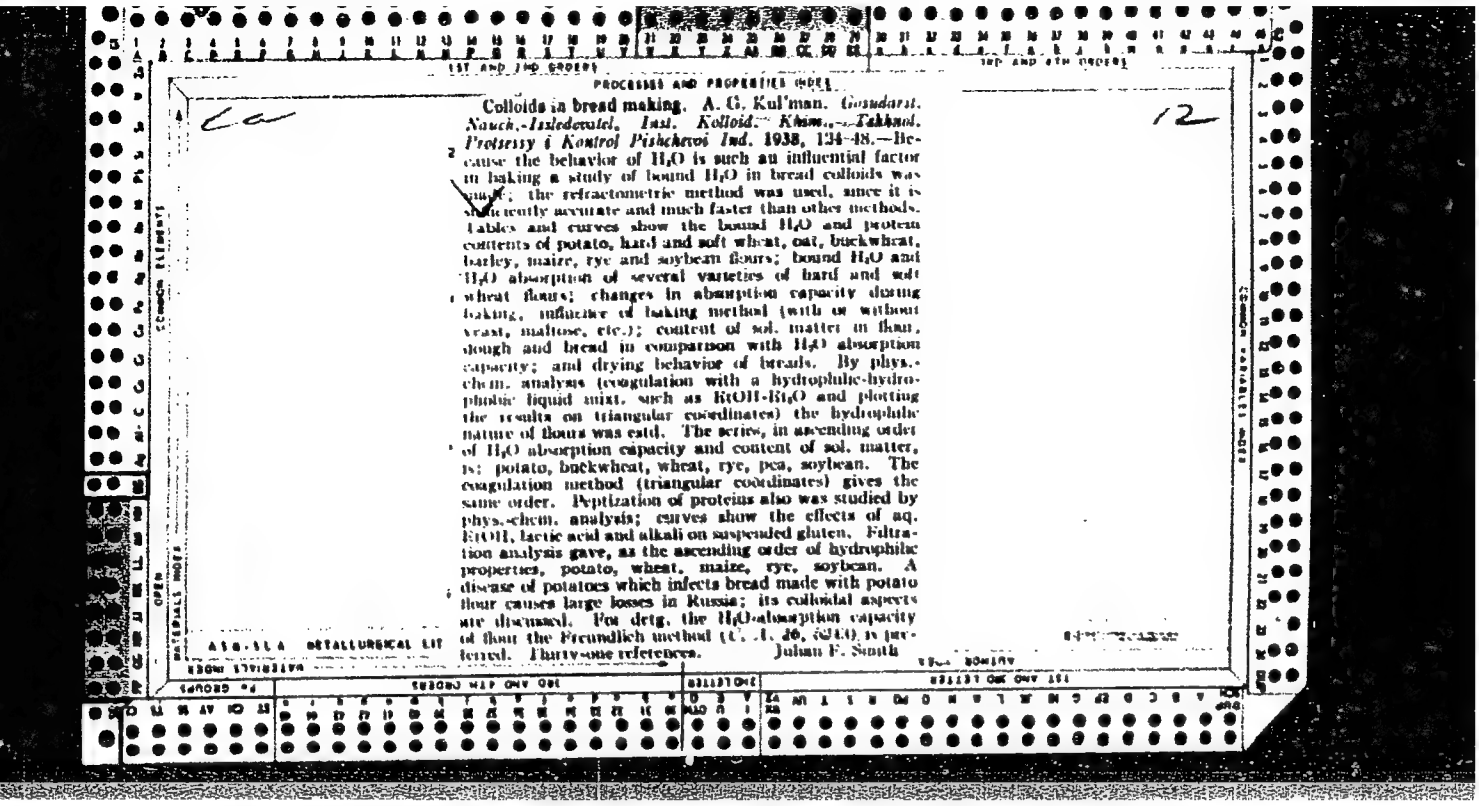
CA

12

A rapid method for the determination of moisture in bakery products. A. G. M. Kul'man, *et al.* *Vsesoyuz. Nauch.-Issledovatel. Inst. Khlebopekarnoi Prom. S. S. S. R.* 1938, 36 pp.—It is proposed to heat the sample with a nonvolatile liquid which remains const. in wt. during the distn. of water (sunflower-seed oil, cottonseed oil, paraffin). The oil is heated for 1–2 hrs. at 200° until no more foam is formed, and then kept in well-sealed glass jars. The sample is heated with the oil in an open Fe crucible in an elec. drying oven or on a sand bath at 183–65°. The moisture is detd. from the loss of wt. A 0.2–0.3% agreement of results in parallel detns. was obtained, and results on the samples of flour, dough and bread agreed with those obtained by drying at 105°. The detns. (including all operations) take about 20–5 min.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



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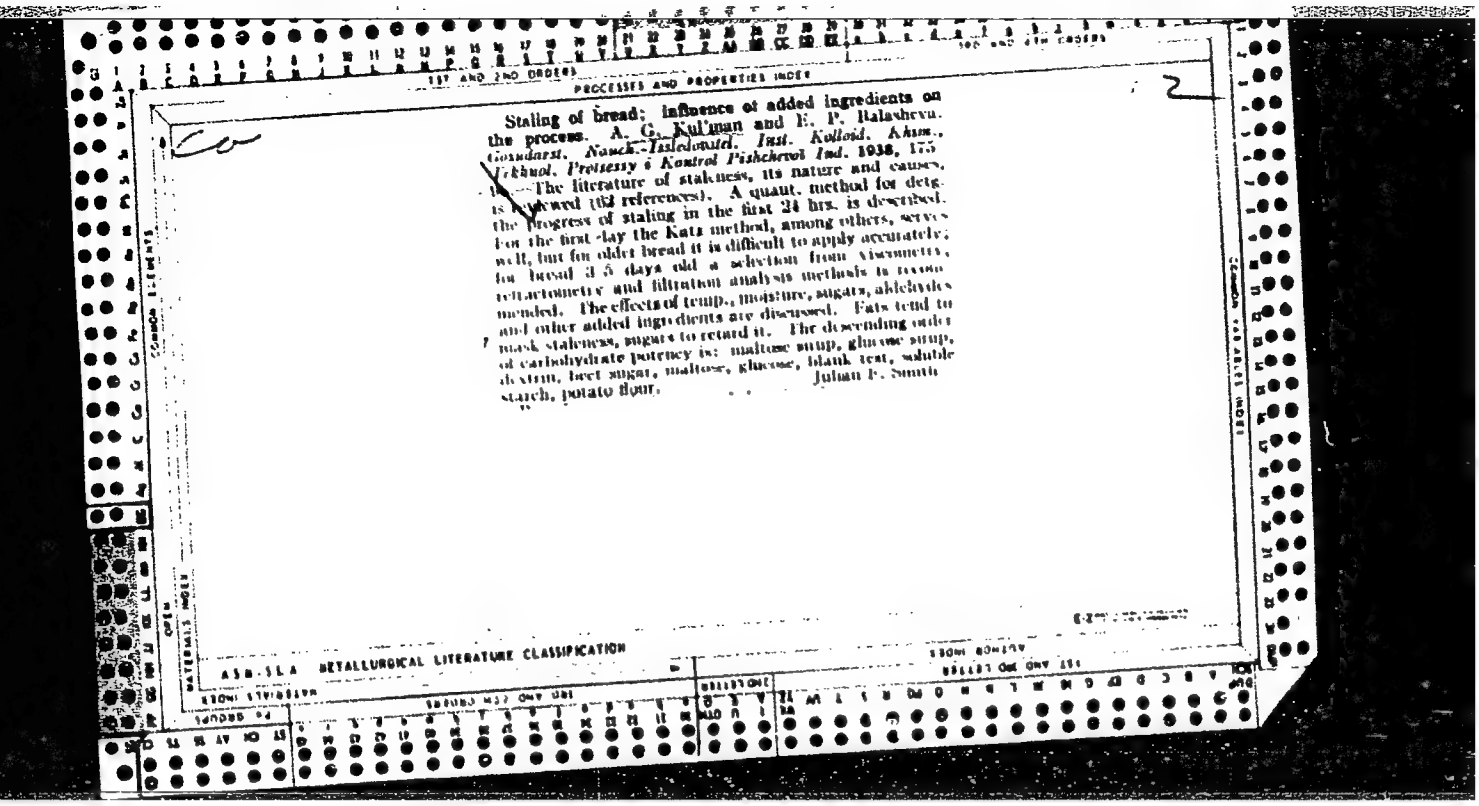
Ca

12

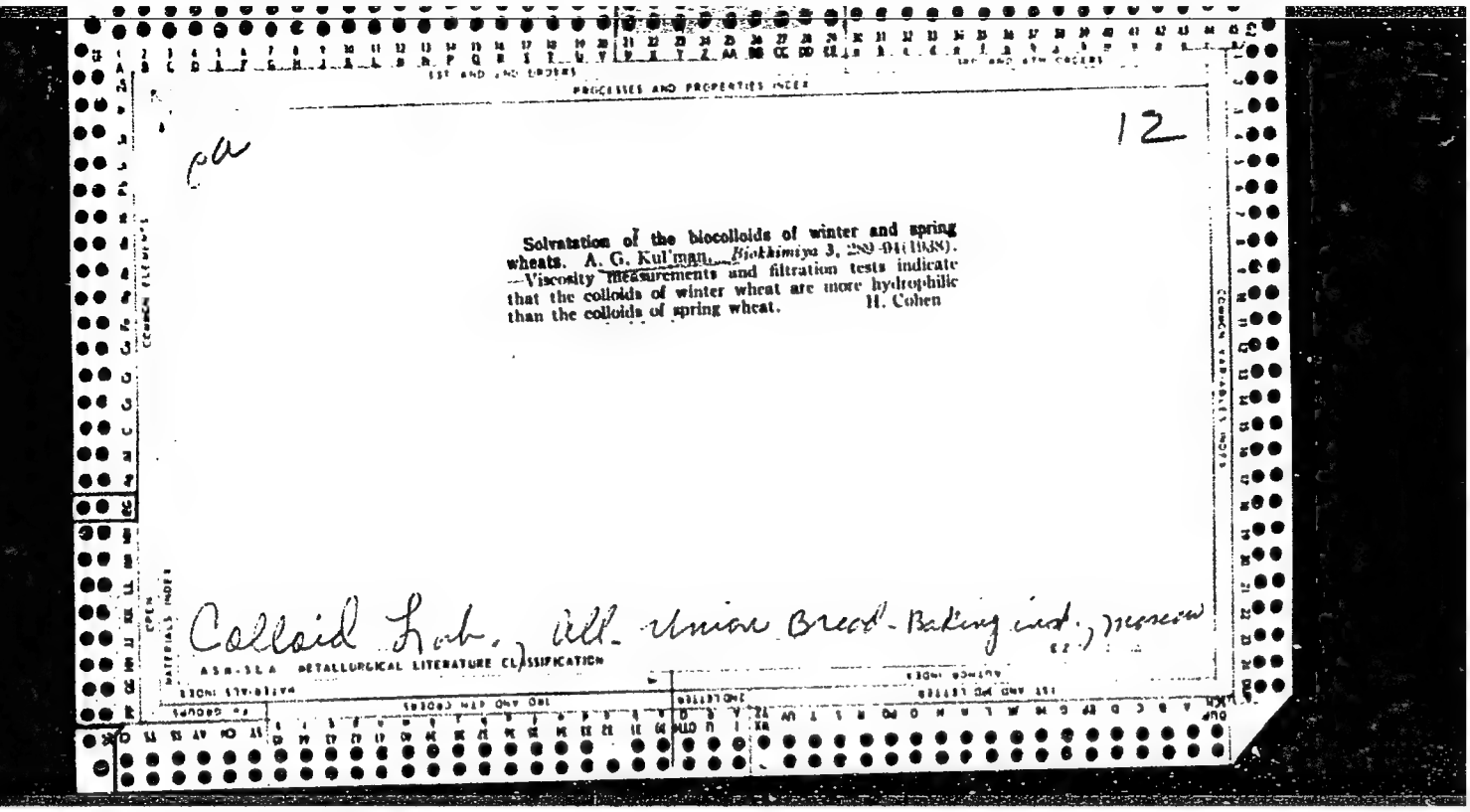
Colloids in bread making. A. G. Kul'man. *Gosudarst. Nauch.-Issledovatel. Inst. Kolloid.-Khim.—Trakhtmol. Protsessy i Kontrol Pishchevoi Ind.* 1938, 134–48.—Because the behavior of H_2O is such an influential factor in baking a study of bound H_2O in bread colloids was made; the refractometric method was used, since it is sufficiently accurate and much faster than other methods. Tables and curves show the bound H_2O and protein contents of potato, hard and soft wheat, oat, buckwheat, barley, maize, rye and soybean flours; bound H_2O and H_2O absorption of several varieties of hard and soft wheat flours; changes in absorption capacity during baking, influence of baking method (with or without yeast, maltose, etc.); content of sol. matter in flour, dough and bread in comparison with H_2O absorption capacity; and drying behavior of breads. By phys.-chem. analysis (coagulation with a hydrophilic-hydrophobic liquid mixt. such as EtOH-H_2O and plotting the results on triangular coördinates) the hydrophilic nature of flours was estd. The series, in ascending order of H_2O absorption capacity and content of sol. matter, is: potato, buckwheat, wheat, rye, pea, soybean. The coagulation method (triangular coördinates) gives the same order. Peptization of proteins also was studied by phys.-chem. analysis; curves show the effects of aq. EtOH, lactic acid and alkali on suspended gluten. Filtration analysis gave, as the ascending order of hydrophilic properties, potato, wheat, maize, rye, soybean. A disease of potatoes which infects bread made with potato flour causes large losses in Russia; its colloidal aspects are discussed. For detg. the H_2O-absorption capacity of flour the Freundlich method (C. A. 30, 5210) is preferred. Thirty-one references. Julian F. Smith



PROCESSES AND PROPERTIES INDEX

Staling of bread; influence of added ingredients on the process. A. G. Kul'man and E. P. Balashova. *Gosudarst. Nauch.-Issledovatel. Inst. Kolloid. Khim., Vikhud. Proizvody i Kontrol Pishchevoi Ind.* **1938**, 175—The literature of staleness, its nature and causes, is reviewed (82 references). A quant. method for detg. the progress of staling in the first 24 hrs. is described. For the first day the Katz method, among others, serves well, but for older bread it is difficult to apply accurately; for bread 3–5 days old a selection from viscometry, refractometry and filtration analysis methods is recommended. The effects of temp., moisture, sugars, aldehydes and other added ingredients are discussed. Fats tend to mask staleness, sugars to retard it. The descending order of carbohydrate potency is: maltose syrup, glucose syrup, dextrin, beet sugar, maltose, glucose, blank test, soluble starch, potato flour. Julian F. Smith

A38-51A METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

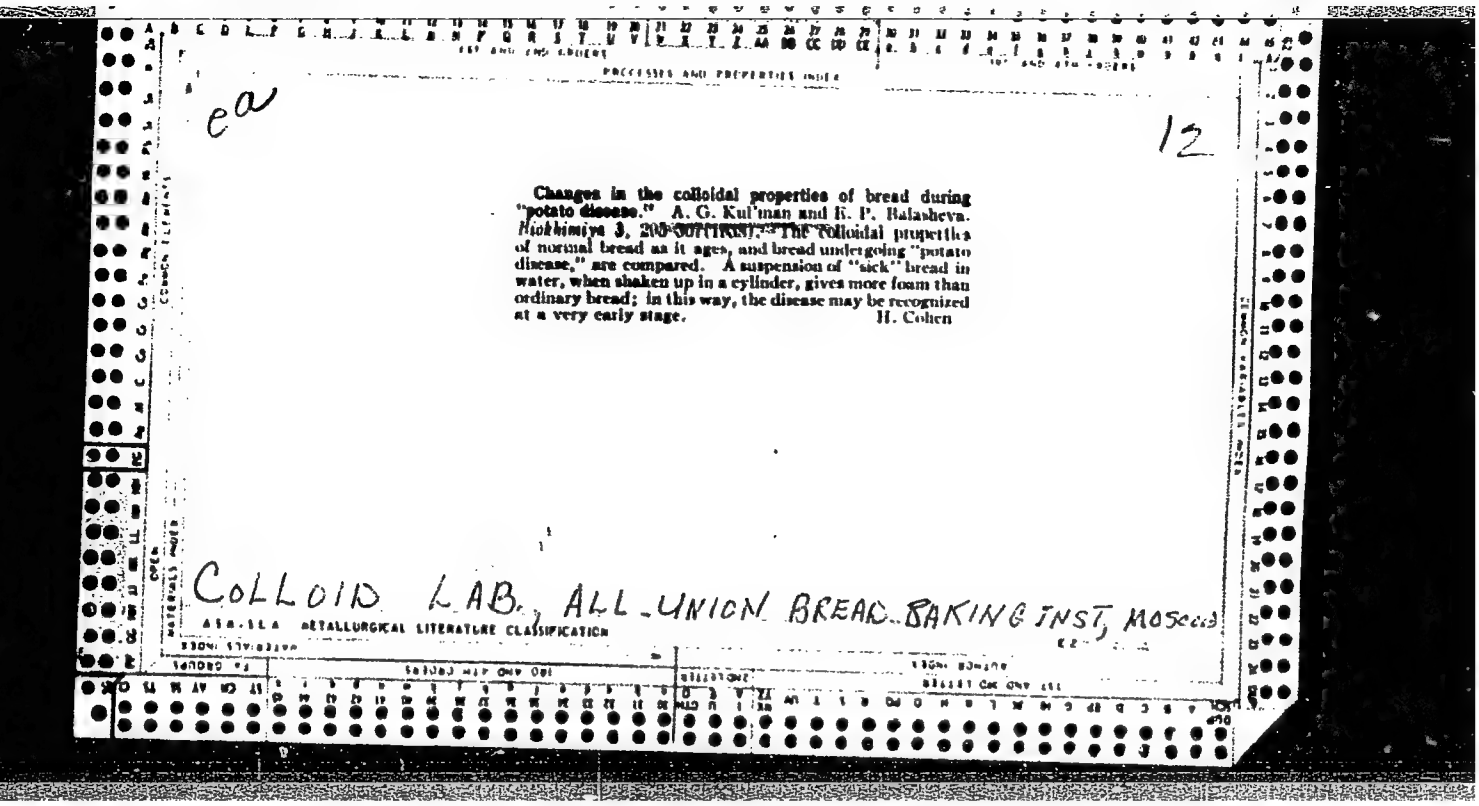
12

pa

Solvatation of the biocolloids of winter and spring wheats. A. G. Kul'man. *Biokhimiya* 3, 289-94(1938). —Viscosity measurements and filtration tests indicate that the colloids of winter wheat are more hydrophilic than the colloids of spring wheat. H. Cohen

Colloid Lab., All-Union Bread-Baking Inst., Moscow

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



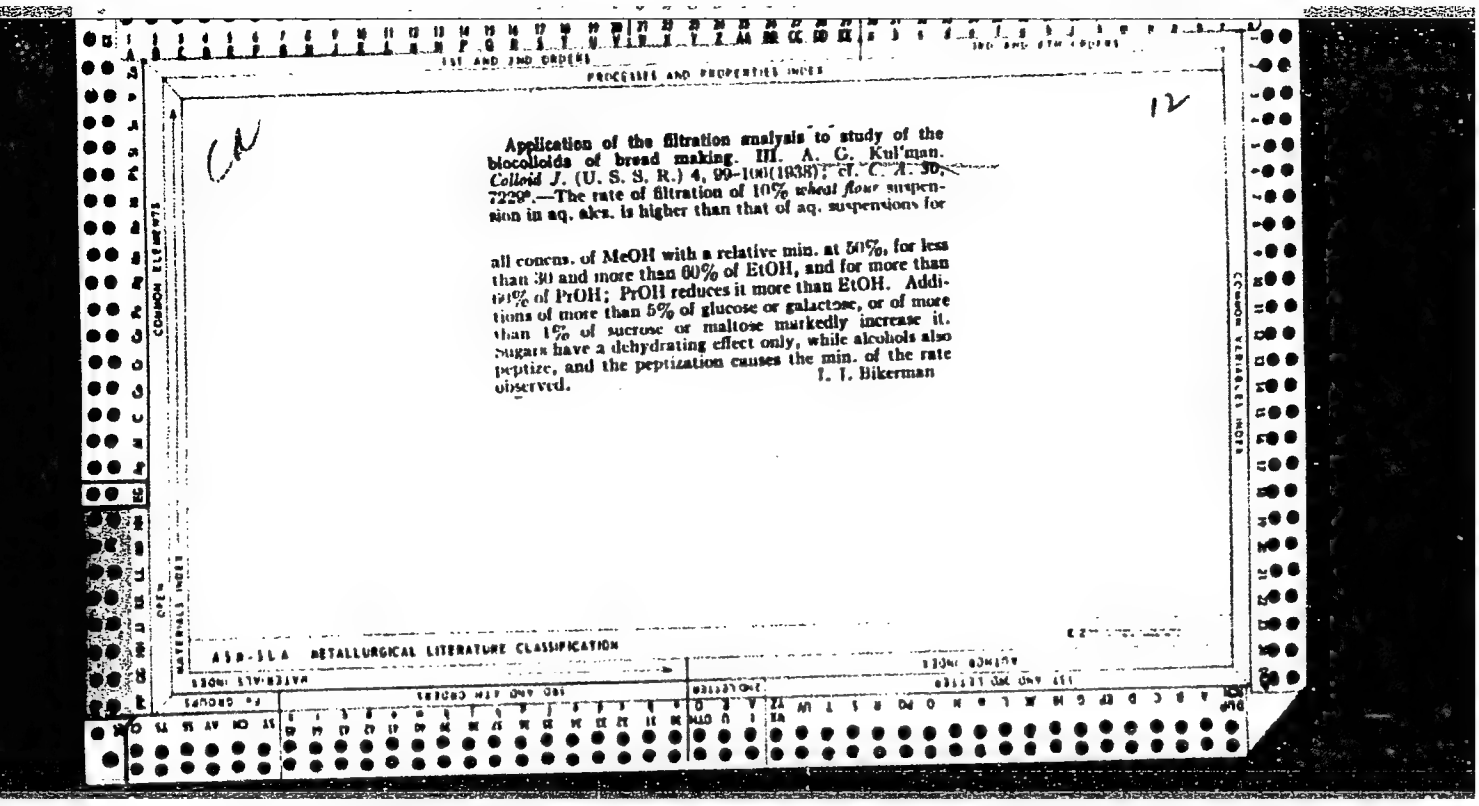
ea

12

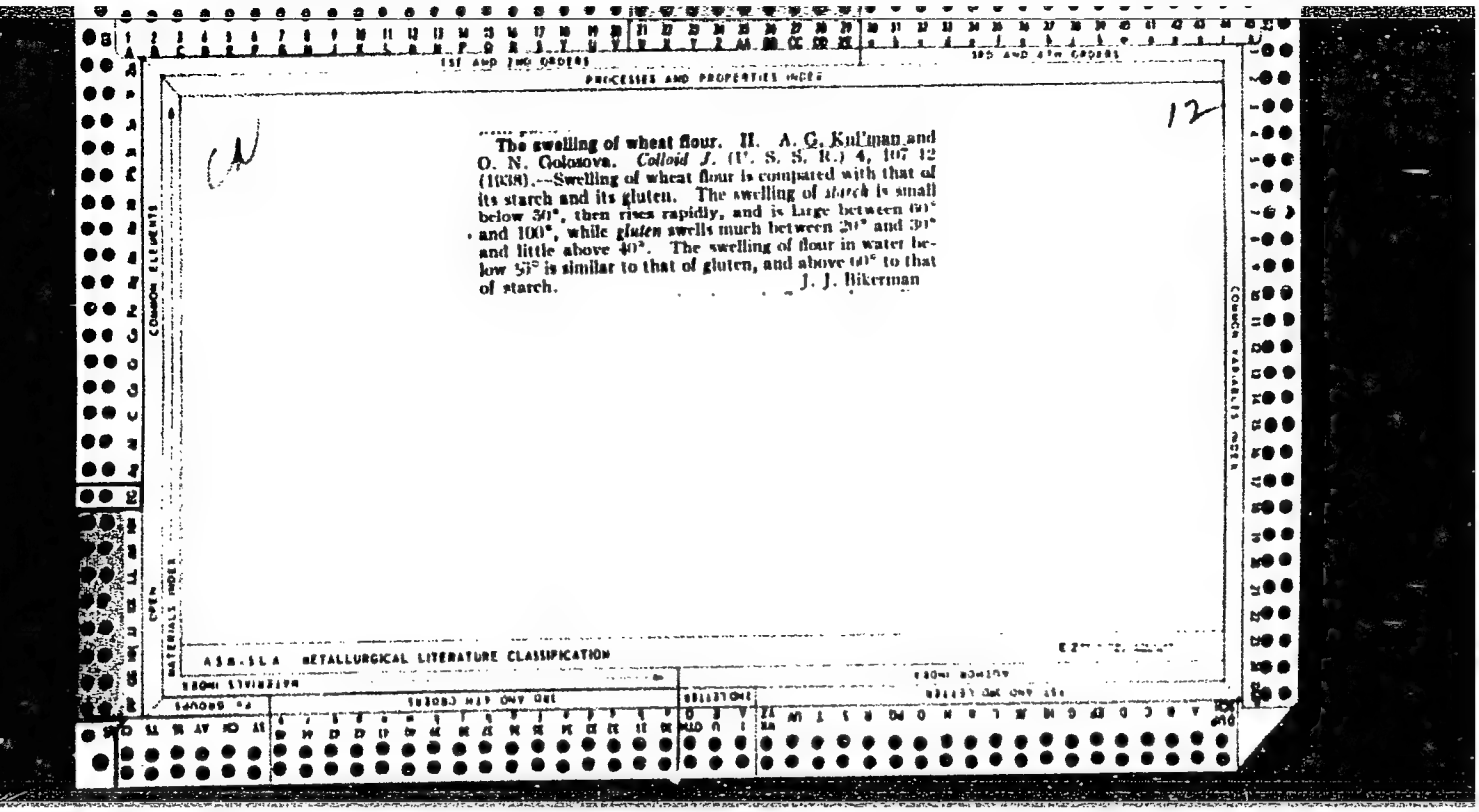
Changes in the colloidal properties of bread during "potato disease." A. G. Kul'man and E. P. Balasheva. *Biokhimiya* 3, 200-207(1938). The colloidal properties of normal bread as it ages, and bread undergoing "potato disease," are compared. A suspension of "sick" bread in water, when shaken up in a cylinder, gives more foam than ordinary bread; in this way, the disease may be recognized at a very early stage. H. Cohen

COLLOID LAB., ALL-UNION BREAD-BAKING INST, Moscow

A58-51A METALLURGICAL LITERATURE CLASSIFICATION



Application of the filtration analysis to study of the biocolloids of bread making. III. A. G. Kul'man. *Colloid J.* (U. S. S. R.) 4, 99–100(1938); cf. *C. A.* 30, 7229⁹.—The rate of filtration of 10% *wheat flour* suspension in aq. alcs. is higher than that of aq. suspensions for all concns. of MeOH with a relative min. at 50%, for less than 30 and more than 60% of EtOH, and for more than 99% of PrOH; PrOH reduces it more than EtOH. Additions of more than 5% of glucose or galactose, or of more than 1% of sucrose or maltose markedly increase it. Sugars have a dehydrating effect only, while alcohols also peptize, and the peptization causes the min. of the rate observed. I. T. Bikerman



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12

The swelling of wheat flour. II. A. G. Kul'man and O. N. Golosova. *Colloid J.* (U. S. S. R.) 4, 107-12 (1938).—Swelling of wheat flour is compared with that of its starch and its gluten. The swelling of *starch* is small below 50°, then rises rapidly, and is large between 60° and 100°, while *gluten* swells much between 20° and 30° and little above 40°. The swelling of flour in water below 55° is similar to that of gluten, and above 60° to that of starch. J. J. Bikerman

COMMON ELEMENTS

MATERIALS INDEX

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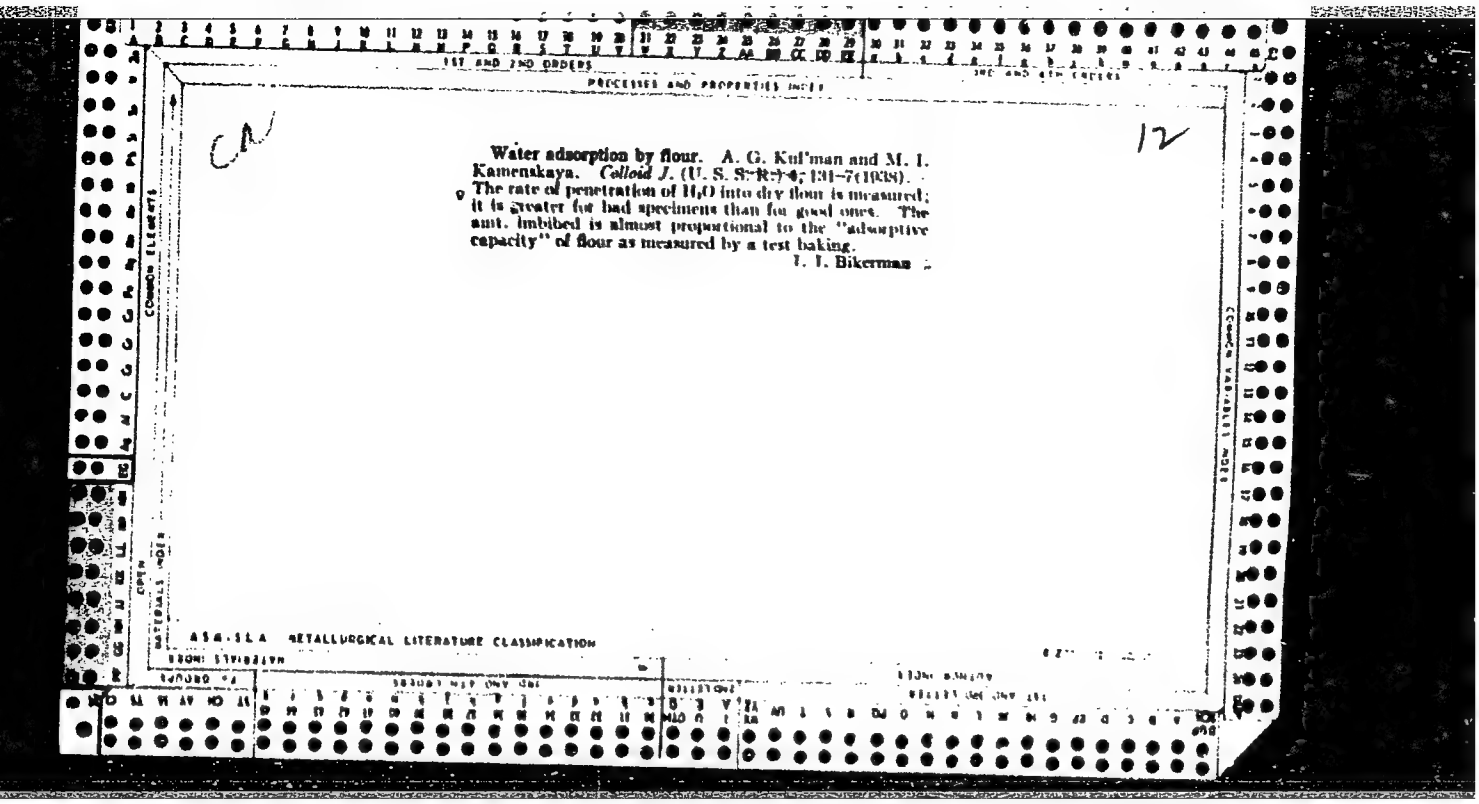
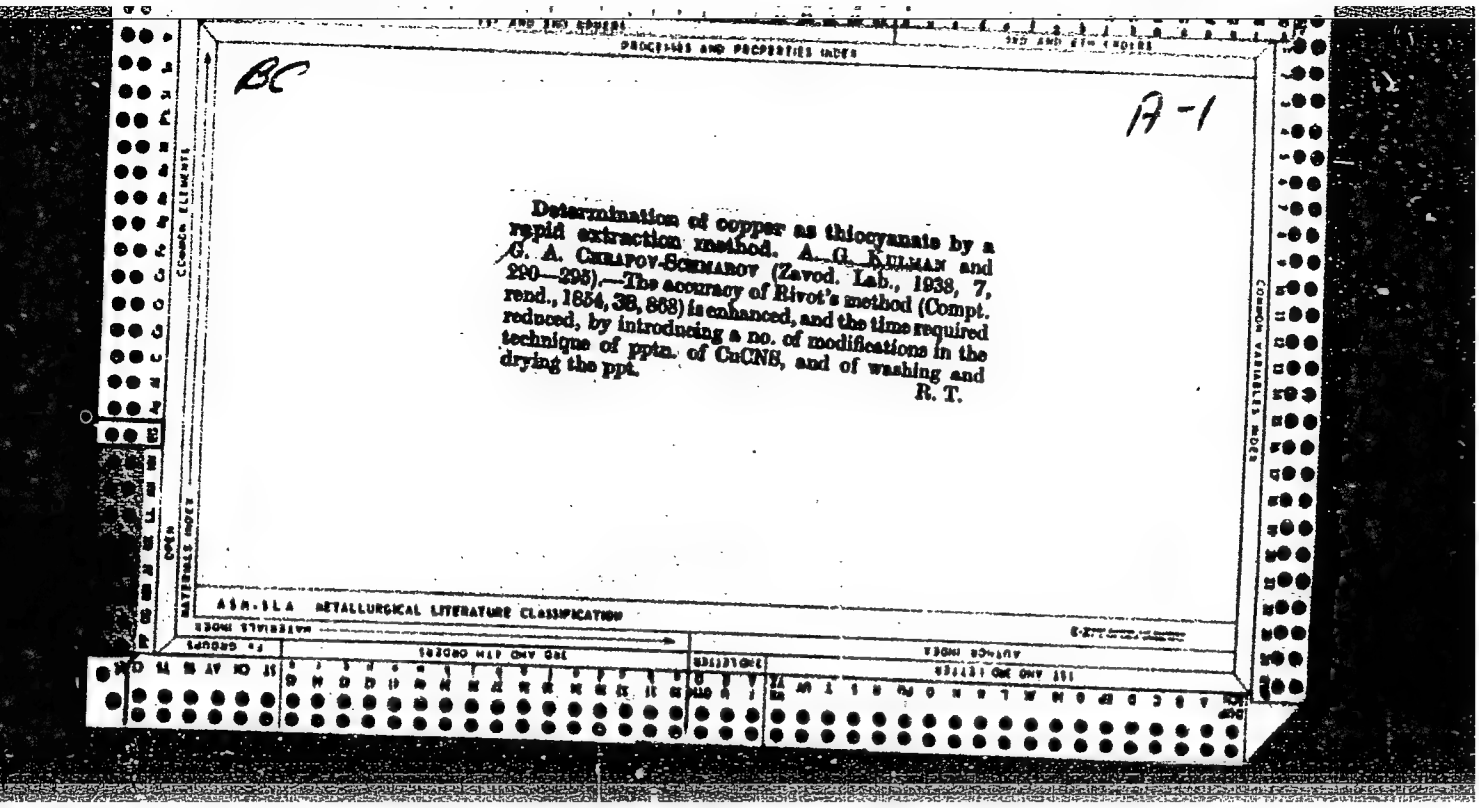


Water adsorption by flour. A. G. Kul'man and M. I. Kamenskaya. *Colloid J.* (U. S. S. R.) 4; 131–7 (1938). The rate of penetration of H_2O into dry flour is measured; it is greater for bad specimens than for good ones. The amt. imbibed is almost proportional to the "adsorptive capacity" of flour as measured by a test baking.

I. I. Bikerman

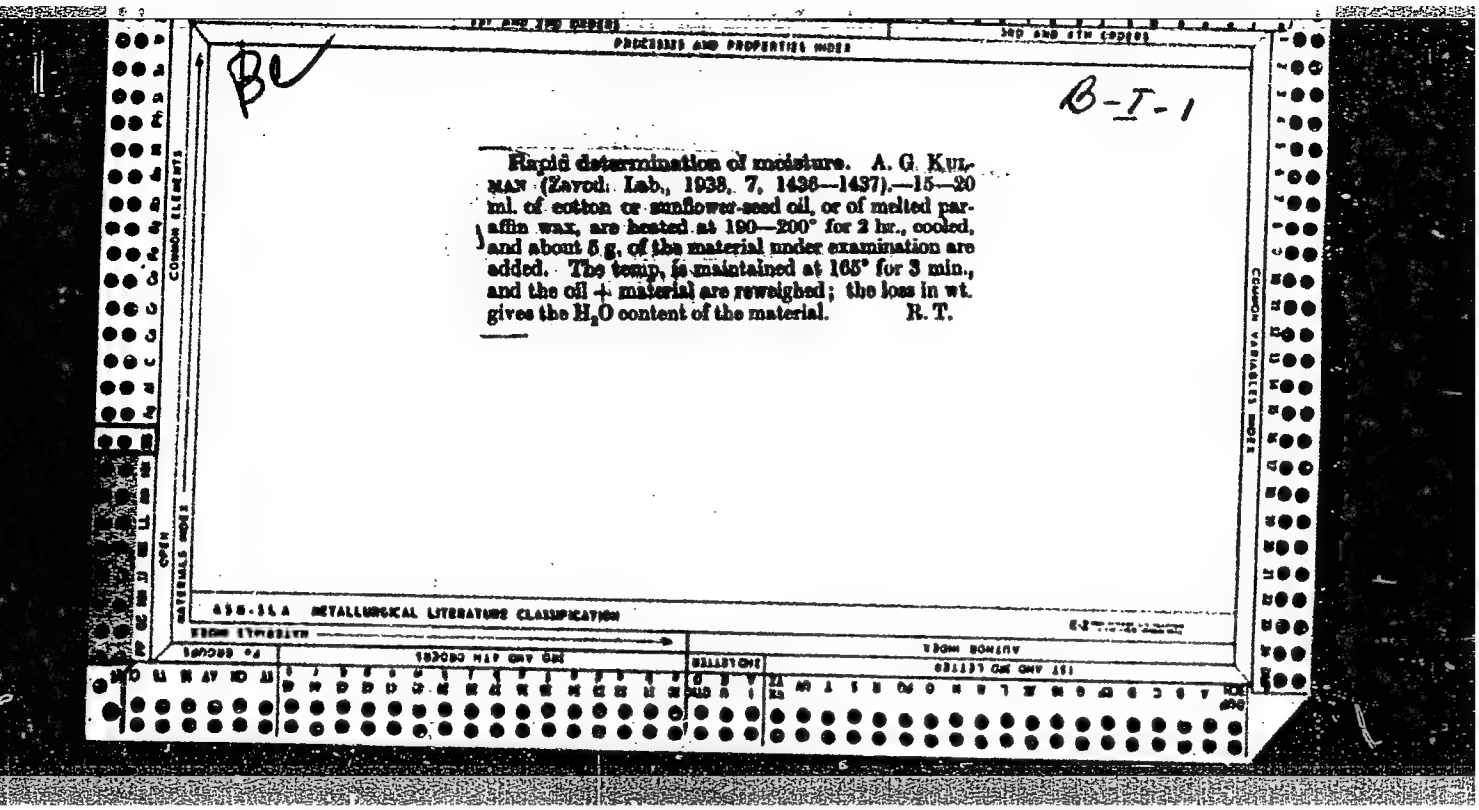


BC

A-1

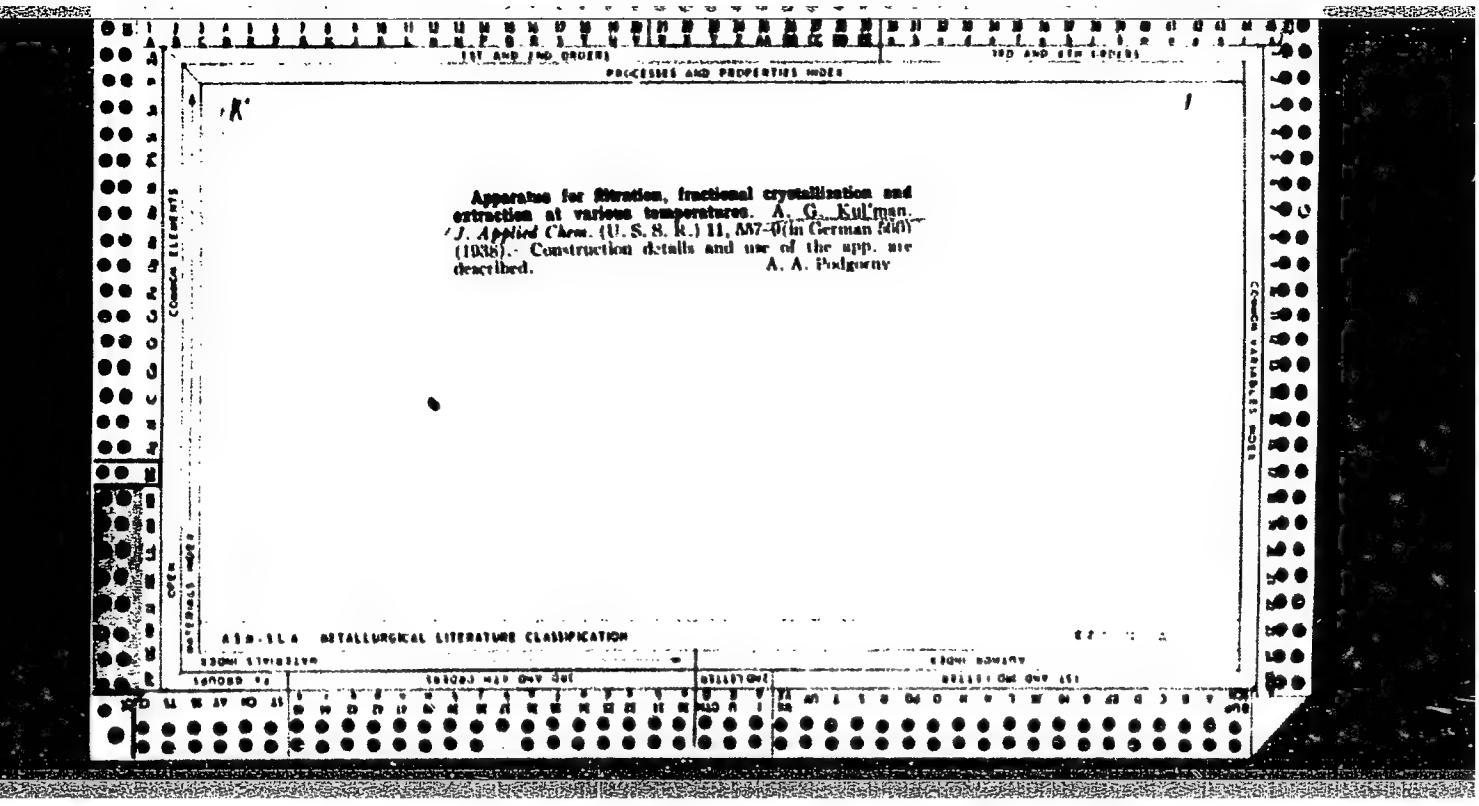
Determination of copper as thiocyanate by a rapid extraction method. A. G. KULMAN and G. A. CHRAPOV-SCHMAROV (Zavod. Lab., 1938, 7, 290—295).—The accuracy of Rivot's method (Compt. rend., 1854, 38, 863) is enhanced, and the time required reduced, by introducing a no. of modifications in the technique of pptn. of CuCNS, and of washing and drying the ppt.

R. T.



B-I-1

Rapid determination of moisture. A. G. KULMAN (Zavod. Lab., 1938, 7, 1436—1437).—15—20 ml. of cotton or sunflower-seed oil, or of melted paraffin wax, are heated at 190—200° for 2 hr., cooled, and about 5 g. of the material under examination are added. The temp. is maintained at 165° for 3 min., and the oil + material are reweighed; the loss in wt. gives the H_2O content of the material. R. T.

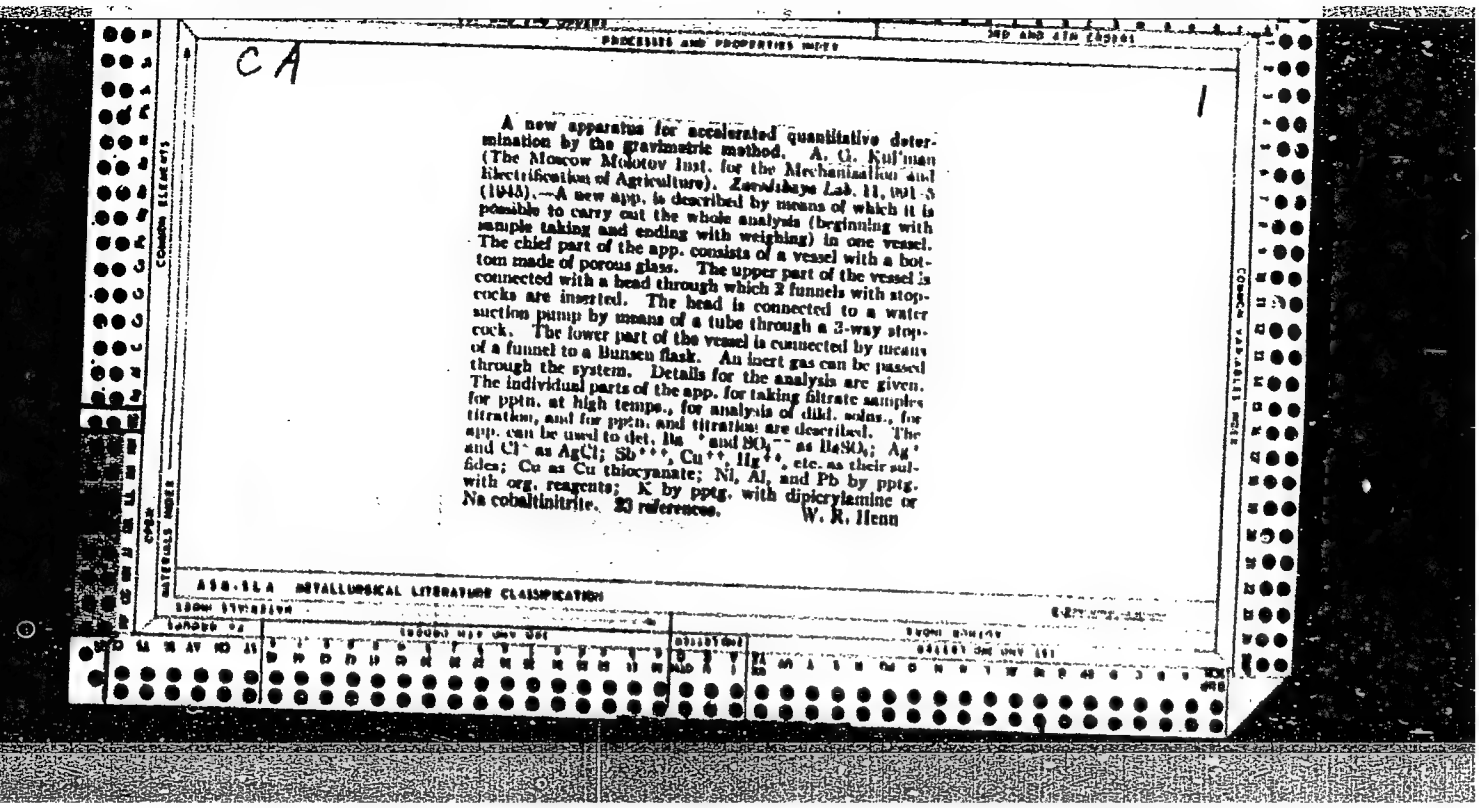


PROCESSES AND PROPERTIES INDEX

K

Apparatus for filtration, fractional crystallization and extraction at various temperatures. A. G. Kul'man. *J. Applied Chem.* (U. S. S. R.) 11, 867-9 (in German 869) (1938).- Construction details and use of the app. are described. A. A. Boigeny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

1

A new apparatus for accelerated quantitative determination by the gravimetric method. A. G. Kul'man (The Moscow Molotov Inst. for the Mechanization and Electrification of Agriculture). *Zavodskaya Lab.* 11, 991-5 (1945).—A new app. is described by means of which it is possible to carry out the whole analysis (beginning with sample taking and ending with weighing) in one vessel. The chief part of the app. consists of a vessel with a bottom made of porous glass. The upper part of the vessel is connected with a head through which 2 funnels with stopcocks are inserted. The head is connected to a water suction pump by means of a tube through a 3-way stopcock. The lower part of the vessel is connected by means of a funnel to a Bunsen flask. An inert gas can be passed through the system. Details for the analysis are given. The individual parts of the app. for taking filtrate samples for pptn. at high temps., for analysis of dild. solns., for titration, and for pptn. and titration are described. The app. can be used to det. Ba^{++} and SO_4^{--} as $BaSO_4$; Ag^+ and Cl^- as AgCl; Sb^{+++}, Cu^{++}, Hg^{++}, etc. as their sulfides; Cu as Cu thiocyanate; Ni, Al, and Pb by pptg. with org. reagents; K by pptg. with dipicrylamine or Na cobaltinitrite. 20 references.

W. R. Henn

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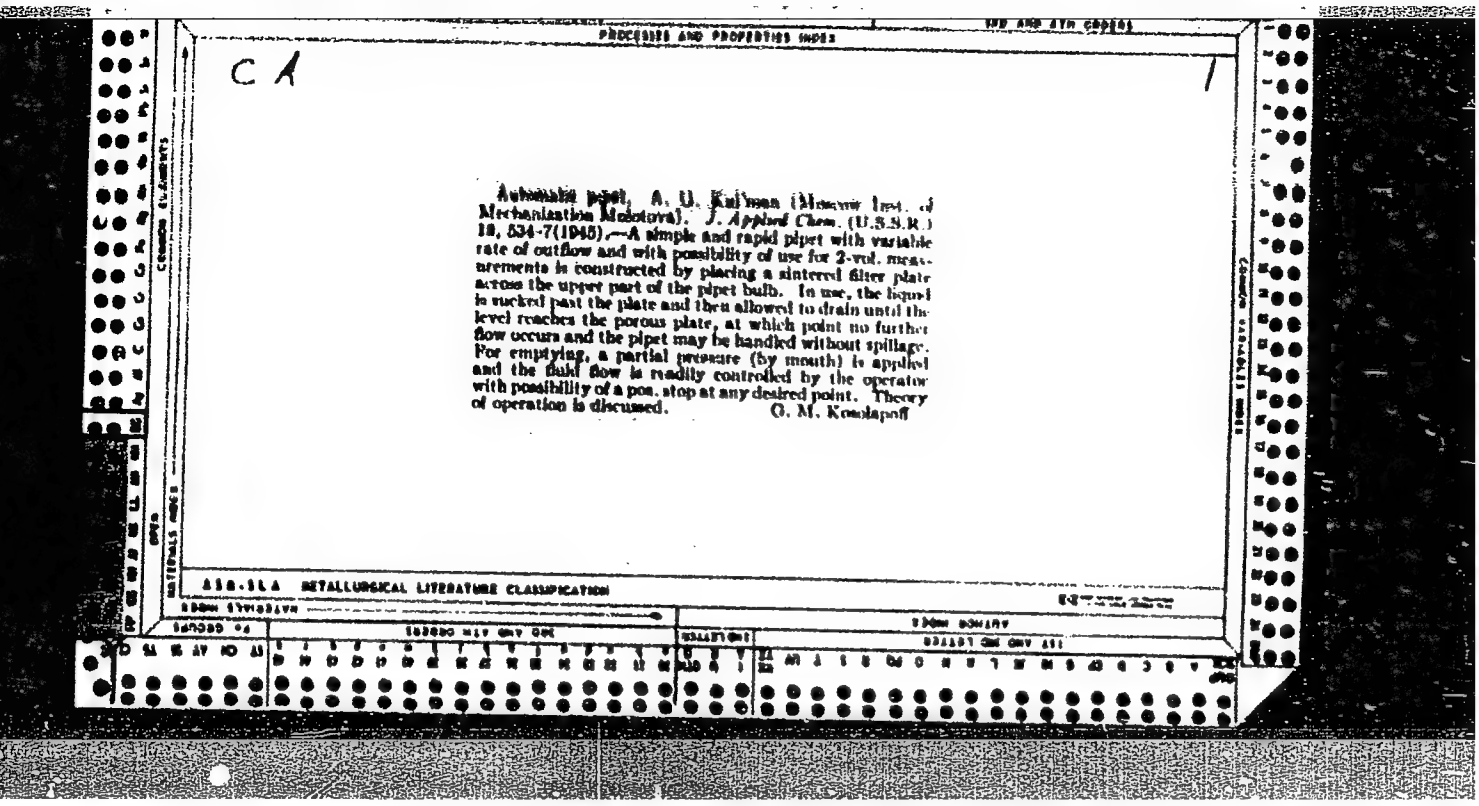
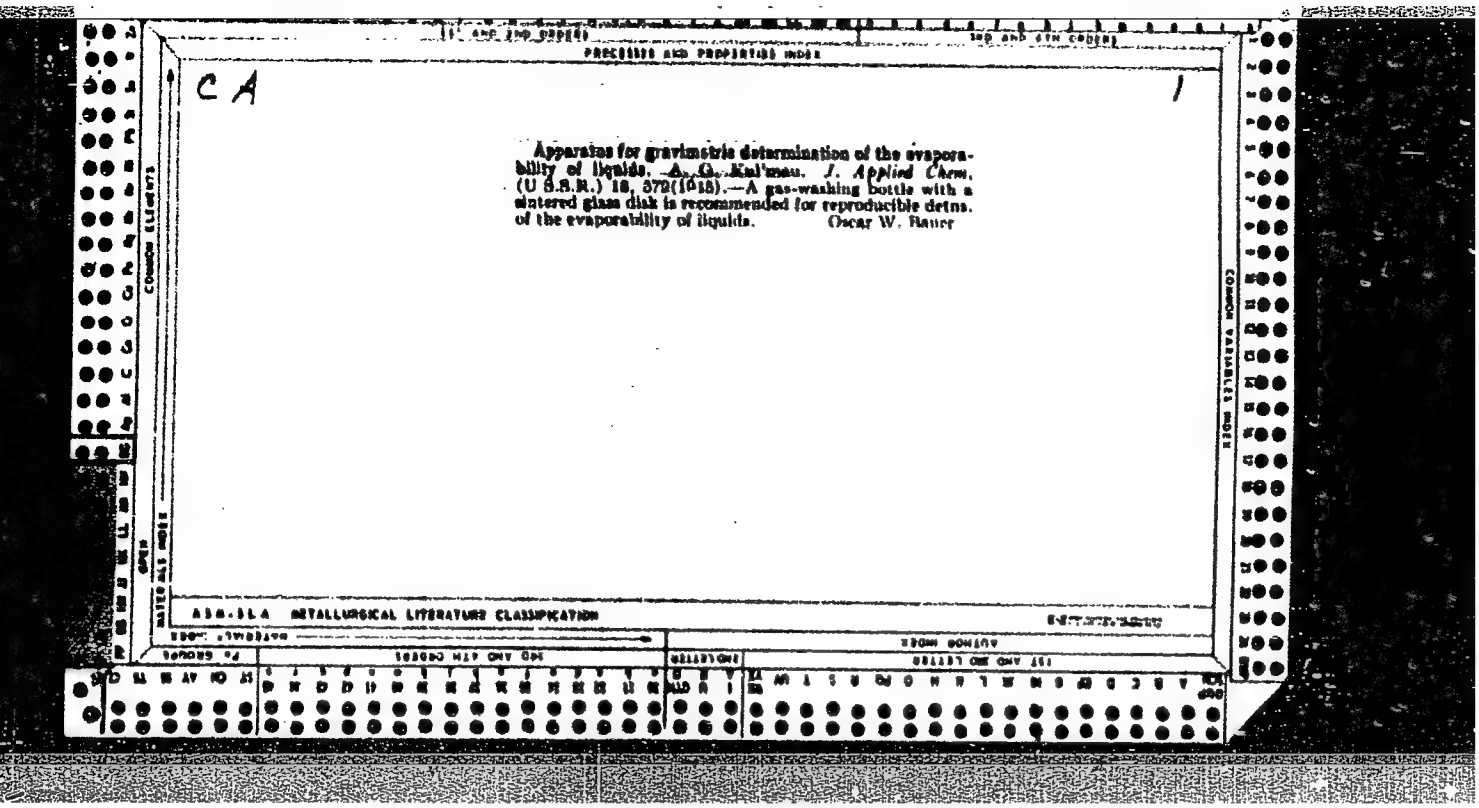


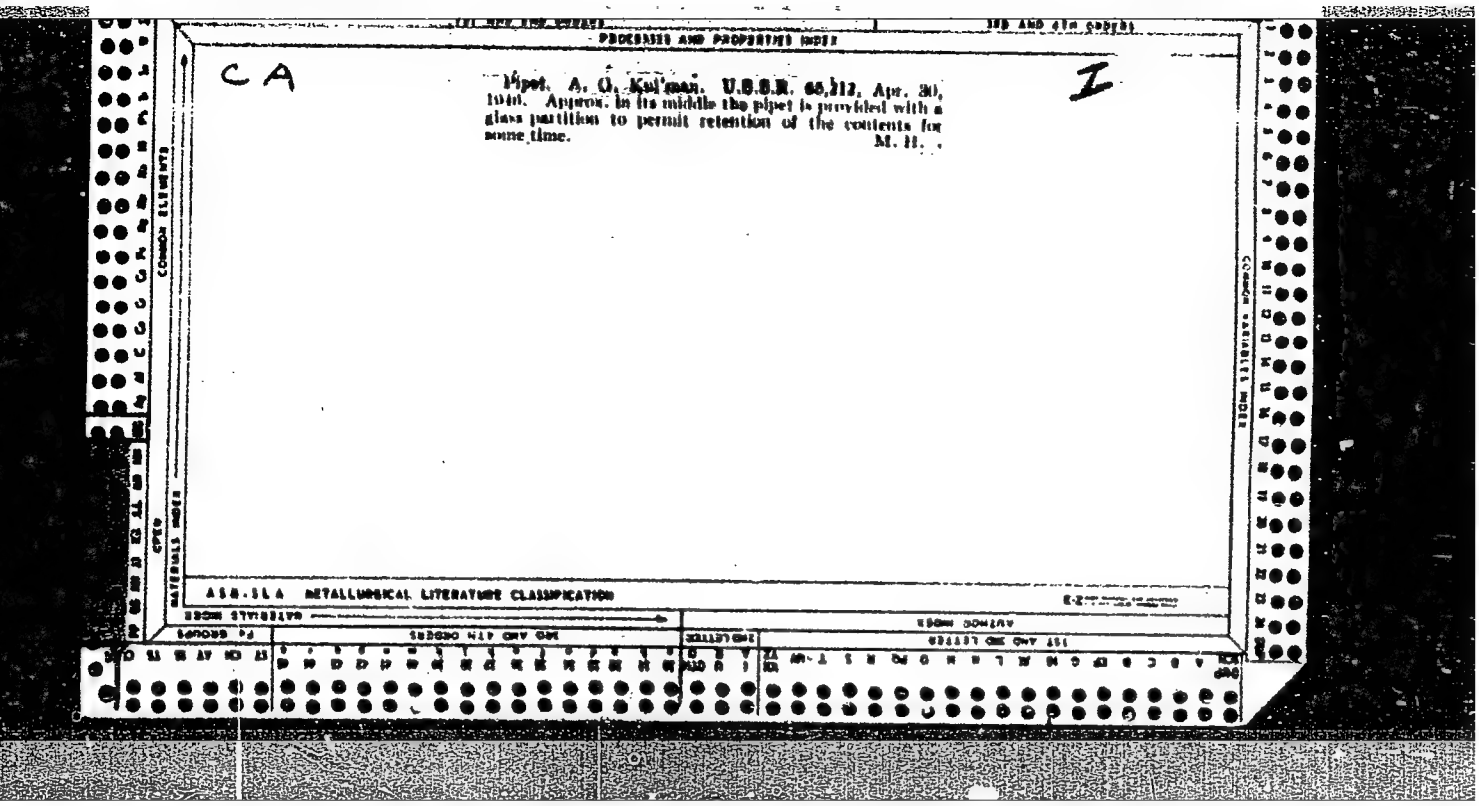


KUL'MAN, A. G.

General and inorganic chemistry 4. perer. izd. Moskva, Gos. izd-vo sel'skokhoz-iaistvennoi lit-ry, 1946. 555 p. (Uchebniki i ushebnye posobiia dlia sel'skokhoz-iaistvennykh tekhnikumov.

Cyr. 4QD53

1. Chemistry, Inorganic.



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KUL'MAN A., KRETOVICH V., TOKAREVA R., AUERMAN L., SMOLINA N., BRANOPOL'SKAYA R.

"Change in the Quality of rye flour during Storage," Dok. AN, 58, No.9, 1947.

KUL'MAN, A. G.

Physical and colloid chemistry Moskva, Pishchepromizdat, 1949. 445 p.

KUL'MAN, A. G.

"Anton Vladimirovich Dumanskiy," Sakharnaya Promyshlennost' [Sugar Industry], 1950, No 6

SO: Bol'shaya Sovetskaya Entsiklopediya, 2nd edition, Vol XV, Moscow, 1949.

KUL'MAN, A.G.

Chemical Abst.
Vol. 48
Apr. 10, 1954
Foods

Investigation of colloidal and chemical properties of bread baked by electric current. A. G. Kul'man and R. A. Branopol'skaya. *Ukrain. Khim. Zhur.* 16, No. 3, 457-69 (1950).—The dough is exposed to a.c. which develops enough heat to bake it. The temp. within the whole loaf remains the same, so that the colloidal properties of bread are the same throughout the whole loaf. To bake, the potential can be changed, whereby the current remains the same, or the potential can be kept constant, thus causing the changes in current due to various processes in the dough. Baking time is decreased considerably. The colloidal properties of rye and wheat bread baked to different degrees both by the regular and elec. method are investigated. The relation between the potential and temp. in bread baked by elec. current is established. During the process of change from dough to bread the ability of bread colloids to bind water decreases, owing to adsorption and osmotic processes taking place. The regularity of change of colloidal properties in both regular and elec. baking is analogous. A specific property of the bread baked by elec. current is the ability to produce foam in their aq. exts. and the stability of this foam with respect to time. This indicated that the heating of dough by elec. current is not identical with the heating in regular baking process.

V. Mihajlov

KUL'MAN, A.G., professor.

[General and inorganic chemistry] Obshchaia i neorganicheskaia khimiia. 5. perer. izd. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1952. 422 p. (MLRA 6:5) (Chemistry)

1. KRETOVICH, V. L. - TOKAREVA, R. R. - PETROVA, I. S. - DROZDOVA, T. V. KUL'MAN, A. G. - BRANOPOL'SKAYA, R. A. - AUYERMAN, L. YA. - SMOLINA, N. I.

2. USSR (600)

4. Wheat

7. Biochemical, colloid-chemical, and technological studies of the maturing of wheat. Biokhim.zerna no. 1, 1952

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

KUL'MAN, A.G., professor, doktor khimicheskikh nauk; REBINDER, P.A. redaktor

[Colloids in bread baking] Kolloidy v khlebopechenii. Pod red. P.A.Rebindera. Moskva, Izd-vo Pishchepromizdat, 1953. 246 p. [Microfilm] (MLRA 7:6)

(Bread) (Colloids)

KUL'MAN, A.G., professor.

Presentation of the concepts of atomic and molecular masses.
Khim. v shkole 9 no.6:67-69 N-D '54. (MLRA 8:1)
(Chemistry--Study and teaching)

KUL'MAN, Avgust Gustavovich; KAPLAN, G.D., redaktor; BALLOD, A.I., tekhnicheskiy redaktor.

[Collection of problems and exercises in chemistry] Sbornik zadach i uprazhnenii po khimii. Moskva, Gos. izd-vo selkhoz. lit-ry, 1955. 167 p. (MLRA 9:4)

(Chemistry--Problems, exercises, etc.)

PHASE I BOOK EXPLOITATION 631

Kul'man, Avgust Gustavovich

Fizicheskaya i kolloidnaya khimiya (Physical and Colloidal Chemistry)
2d ed., rev. and enl. Moscow, Pishchepromizdat, 1957. 412 p.
10,000 copies printed.

Ed. (title page): Rebinder, P.A., Academician. Ed. (inside book): Belikova, L.S. Tech. Ed.: Chebysheva, Ye.A.

PURPOSE: This manual is intended for students specializing in technology at the technical schools (tekhnikums) of the food industry and for workers of the food industry.

COVERAGE: This book covers the field of physical chemistry and colloidal chemistry according to requirements for secondary technical schools. The text is made easier by the introduction of numerous tables, diagrams, graphs, and illustrations. The needs of food technologists are taken into consideration.

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Physical and Colloidal Chemistry 631

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SOV-3-58-8-4/26

AUTHOR: Kul'man, A.G., Professor, Doctor of Chemical Sciences

TITLE: The Role of Chemical Engineering Rises (Vozrastayet rol' inzhenernoy khimii)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 8, pp 20 - 22 (USSR)

ABSTRACT: The May Plenum of the TsK KPSS has set goals in the field of chemistry, which make it necessary for the higher school instructors to study the entire system of training vtuz students in chemistry. The problem of so-called chemical engineering has been studied for some time. Great experience in this field has been gained by the chairs of chemistry of such Moscow vtuzes as the MVTU imeni Bauman, the Moskovskiy institut inzhenerov zheleznodorozhnogo transporta (Moscow Institute of RR Engineers), The Power Engineering, the Aviation, the Highway and other institutes. However, the work of these chairs has not become widely known to pedagogical circles. The number of textbooks on general chemistry is far too small. N.L. Glinka's has won wide recognition, and in 1957, the valuable textbook of M.K. Strugatskiy and B.P. Nadeinskiy was published. But these books are insufficient. The country's vtuzes are usually divided into 2 groups - chemical

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and non-chemical. The author says that it is necessary to divide them into 3 categories: 1) chemical, 2) technological and biological, 3) vuzes of an engineering-mechanical type. While the first two categories are supplied with a good program and good teaching aids, the vtuzes of the engineering type still need special programs, textbooks, problem books and books for laboratory use. The author speaks of an under-rating of the role of chemistry at the engineering vtuzes, and considers the article of Professor I.N. Putilova and Docent G.A. Raytsyn in Nr 7 of this periodical, to have been published at the proper time. There is 1 Soviet reference.

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